

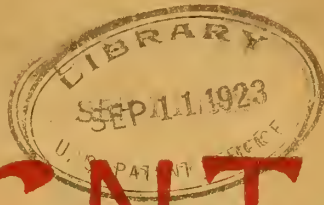
QTL
1
069
NMAH

ORIENTAL MOTOR .

v.1, no. 10-12.

Jan.-Mar. 1920.

TL
4
069



THE ORIENTAL MOTOR

A MONTHLY MAGAZINE DEVOTED TO MOTOR INTERESTS IN THE ORIENT

VOL. I

SHANGHAI, JANUARY, 1920.

No. 10.



A Bit of Yangtszepoo Road, Shanghai.

50 CENTS. MEX. THE COPY.

To Miss A Copy Is To Lose Valuable Information—

THE ORIENTAL MOTOR is a history of the development of Motor Cars, Airplanes, and Automotive Equipment in the Far East told month by month. To miss a copy is to omit a chapter of this most absorbing and interesting development. In addition, THE ORIENTAL MOTOR gives the cream of motor intelligence from all parts of the world.

**Subscribe For or Get Your Copies
From Any Bookstore or News Stand.**

Subscription, China and Japan, \$5.00 Mexican. Foreign \$6.00 Mexican.
50 cents Mexican per single copy.

THE ORIENTAL MOTOR

FIVE HONGKONG ROAD, SHANGHAI.

The causes of engine knocks— and how to prevent them

THE expert motor car mechanic can sit at the wheel and tell you what all the sounds in the engine mean. He knows the good sounds from the bad; the low steady hum that denotes the even flow of power, from the knocks in the crankcase and the "slaps" of the piston that are sure indications of trouble.

Learn to know the meaning of the strange noises of your engine. It will pay you by lowering your cost of upkeep and reducing your consumption of fuel and oil.

Damage caused by inferior oil

A fundamental fact of engine mechanics is that *all noise and knocks in the engine mean loss of power and rapid wear*, which is almost invariably caused by the use of inferior oil.

Inferior oil causes a great increase in friction and wear, allows an excess of oil to be carried into the firing chamber to form carbon, and permits the escape of power past the flying pistons.

Ordinary oil breaks down when it is subjected to the intense heat of the engine. Temperatures of from 200° F. to 1000° F. in operation reduce a great part of its bulk to sediment which has *no lubricating value*. Sediment crowds out the lubricating oil from the fast moving parts and breaks the oil film which must always prevent metal to metal contact.

The final result of the use of ordinary oil is a noisy knocking motor which could have been prevented by the use of an oil that resists heat.

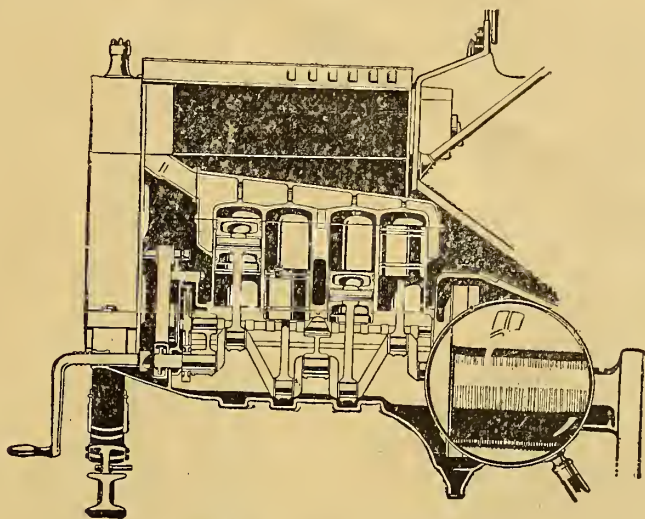
Solving the sediment problem

After years of research by Veedol engineers and chemists a new method of refining lubricating oil was discovered—the famous Faulkner Process, used exclusively by this company. By this process is produced the scientific lubricant—Veedol. Veedol possesses characteristics different from those of ordinary oil, which enable it to resist heat.

VEEDOL Oils:—Zero Light Medium, Heavy and Extra Heavy, Taels 1.72 per gal. can.

VEEDOL Transmission Gear Oil, Taels 1.21 per gal. can.

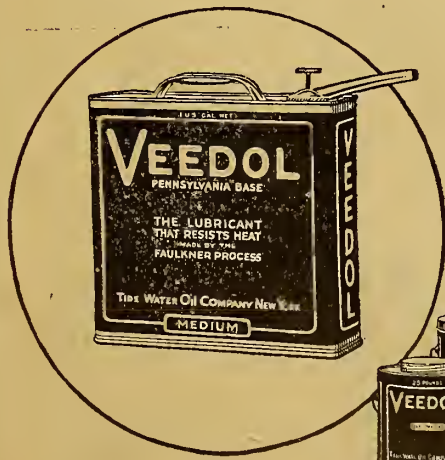
VEEDOL Greases:—Light, Medium and Heavy Cup—Light, Medium and Heavy Graphite—Gear Compound, Taels .35 per lb. can.



Make this simple test

Drain oil from crankcase and fill with kerosene. Run engine *very slowly* on its own power for thirty seconds. Drain all kerosene. To remove kerosene remaining in the engine refill with one quart of Veedol. Turn the engine over about ten times, then drain mixture of kerosene and refill to proper level with correct grade of Veedol.

A test run on familiar streets will show that your car has new pickup and power. Watch for several days and you will find that oil and gasoline consumption has been decreased.



Sole Agents for Shanghai and Yangtsze Ports

MENCARINI & Co.

1B, KIUKIANG ROAD, SHANGHAI.

RETAIL BY

SQUIRES, BINGHAM & Co.

17 Nanking Road, Shanghai.



Firestone

Non-Skid Tires

GUARANTEED
AGAINST DEFECTS
IN
MATERIAL
OR
WORKMANSHIP
FOR
5,000 MILES
SERVICE.

SOLE AGENTS

CENTRAL GARAGE Co.

2A JINKEE ROAD

SHANGHAI

PHONE: C. 3809

ALSO SOLE AGENTS FOR

WILLYS-KNIGHT

OVERLAND

ANDERSON

ALLEN

TEMPLAR

GARFORD TRUCKS

LEE TIRES

FEDERAL TRUCKS.

THE ORIENTAL MOTOR

Vol. I.

JANUARY, 1920.

No. 10.

A Monthly Magazine devoted to Motor Interests in China and the Far East generally.

Registered at the Chinese Post Office as a Newspaper.

CONTENTS.

	PAGE
Shanghai to be Commercial Air Port	5
Simplicity of Design Marks British Cars	8
An Electric with Speed	10
Planes are Safer than Autos	12
Editorial	14
Truck Performance can be Gauged by Ton Miles	16
Notes from Here and There	18
Motor Car Insurance a Needed Protection	20
The Little Things about Your Car	22
U. S. Makers Estimate Output for 1920.....	24
With Engine You'd have A Motors Factory	26
American Car Specifications	30
Latest British Car Prices	31
Fast Growth of Motor Company Brings Fine	32
Motors Defeat Bolshevism	33
Anti-Freezing Solutions	34
This Ford from Canada	35
Pros and Cons of Left-hand Steering	36
Wet Weather Motoring	38
Commercial Air Routes in China	40
Mass Production Causes British Merger.....	41
Shanghai's Pioneer Truck Transportation.....	42
Auto Industry in Belgium	44
An American Solution of the Traffic Problem	45
Australian Airman hops from England Home	46
Millions Wasted in Tires	48
A Speed Event for France	50
Motor Cyclists First to Cross South America	52
Airplanes Still in Demand	54
General Motors Corp., Erecting \$37,000,000 Home....	55
Motors in Bombay ...	56
Index to Advertisers.....	56
Buyer's Reference Guide	58

Published Monthly by

THE ORIENTAL MOTOR

FIVE HONGKONG ROAD, SHANGHAI, CHINA.

Subscription, China and Japan, \$5.00 Mexican. Foreign \$6.00 Mexican.

50 cents Mexican per single copy.



WHERE

learning may fail to
impress experience will
convince.

The motorist of ripe
experience will specify
Dunlop Tyres, and then en-
joy those fruits of wisdom—

Security and Economy.



DUNLOP

RUBBER COMPANY, LIMITED

Founders throughout the world of the
Pneumatic Tyre Industry.

PHONE :

2248. 20 Kiukiang Road, Shanghai.

2073. Dickinson Hall, Tientsin.

2270. E. 3, Tong Chang An Chien, Peking.

CABLE :

"Pneumatic"

"

"



THE ORIENTAL MOTOR

A MONTHLY MAGAZINE DEVOTED TO MOTOR INTERESTS IN CHINA AND THE FAR EAST GENERALLY.

VOL. I.

SHANGHAI, JANUARY, 1920.

No. 10.

SHANGHAI TO BE COMMERCIAL AIR PORT.

City Placed as One of the Principal Points on Proposed Aerial Derby Around the World.

"This is Shanghai. San Francisco 6,692 miles, Rome 8,066, London 9,159."

May be the intermittent message by means of wireless, imitating such signals as are now used for ocean transportation, to aerial travelers passing over the city of Shanghai by day and night in the future. Searchlights directed skyward will indicate the limits of the modern landing field built near the Yangtsze in order that both land and sea-planes may be accommodated.

Fanciful as this may seem the trend of present events would seem to indicate that the coming of the commercial aviation routes of China and of the world will not be long in coming to Shanghai.

For a number of years Shanghai has been steadily assuming the proportions of the New York of the Far East in ocean passenger and freight traffic. With the marking of the route from Rome to Tokyo by the Italian Government expedition, Shanghai first assumed importance as a world airport and following this selection comes the announcement that one of the principal ports in the air derby around the world now being organized by the commission representing the Aero Club and the Aerial League of America, will be this city.

This commission which is headed by Commodore Louis D. Beaumont, a member of the board of Governors of the Aero Club of America and one of the foremost figures in the promotion of aircraft production and development in the United States, has just embarked from Shanghai for Manila, after making arrangements for the local stage of the proposed flight in this city, to continue the work of mapping out and stationing a course around the world. The other members of the commission are: Major Charles J. Glidden, executive secretary, well-known for the famous Glidden tours and the

Glidden Automobile Trophy, and Benjamin Hillman, a retired American business man, treasurer.

Before leaving Shanghai the commission announced that at least ten aviators from China, coming from the



Commodore Louis D. Beaumont, President, Round the World Air Derby Commission.

governmental air service and having the backing of the Republic of China, would participate in the coming event and that possibly Shanghai would have at least one airman as its representative.

Coming close on the flight across the Atlantic by the American and British airmen, the flight from England to Australia, and the start of the Rome to Tokyo flight of the Italian airmen, the work of the commission in the city of Shanghai created much comment, enthusiasm and interest. This enthusiasm reached such a point as to warrant the establishment of an Aero Club of Shanghai, one of whose purposes is to prepare for the reception of airmen who enter the flight around the world and prepare safe landing accommodations for them. The Aero Club of Shanghai after the start of the organising committee by the Shanghai Rotary Club took definite form at a meeting held during the second week in January at the Cafe Carlton, where fifty or more signified their willingness to constitute the charter membership of the body. A temporary organization was formed with Y. C. Tong as temporary president, Major William R. McBain, as vice-president and L. M. Bocker as secretary and treasurer. A membership committee was appointed and active steps are being taken to make the permanent organization a body of more than 200 charter members.

Major McBain is the first man in Shanghai to own a private pleasure aircraft and has seventeen Boche planes to his credit during his service with the British Royal Flying Corps. L. M. Bocker is also a former aviator, having been with the air forces of the United States army and was at one time officer in charge of the flying office at Ellington Field.

Two years ago a flight across the Atlantic would have been pronounced an impossibility by even airmen experienced in the game. Two years ago the trans-continental race across the United States, the flight from England to Australia, the flight from France to Africa and the flight from Rome to Tokyo would have been hailed as originating from the mind of a twentieth century Jules Verne. But recent developments and recent flights have entirely reversed the opinion of even the most conservative laymen and the world circling tour which is soon to be staged appeals to the public not as an imaginary possibility but as a step forward in the development of air routes and air craft.

From New York to Shanghai, according to the tentative routes mapped out by the commission, the aviators will have their choice of three different courses; one from Seattle by way of the Aleutian Islands, one from San Francisco via Honolulu and one from San Francisco to Yokohama direct.

The route entailing the most land travel and for that reason the safest of the three proposed air courses is the one which starts from Seattle goes northward by way of Alaska across Bering Strait to Russia down the coast of Russia to

Japan and from Japan to Shanghai by way of Saishuto Island and 359 miles over sea. The route and the mileage from New York follows:

	Miles	Miles	
New York to Seattle			
Wash.	2929	2929	
Seattle to			
Sitaka, Alaska	700	3629	Landing stations about every 150 miles
Yakutat	213	3842	
Cordova	195	4037	
Seward	140	4177	
Kodiak	161	4338	
Tagidak	110	4448	
Chirikof	55	4503	
Simeonof	143	4646	
Sanak-Eaton	126	4772	
Unimak	60	4832	
Unalaska	150	4937	
Ummak	60	4997	
Yunaska	96	5093	
Atka	142	5235	
Amchitka	230	5465	
Kiska	60	5525	
Semichi	130	5655	
As the above is in			
nautical miles in-			
crease distance 2726			
Seattle to Semichi			
371 miles to	3097		
Statute miles	371	6026	
Semichi to			
Attou Russia	56	6026	In Russia
Nikloski-Behring	240	6322	
Kamchatka River	125	6447	
Petropavlovsk	215	6662	
Nautical miles 636			
increase to Statute			
miles 87 to 723 ...	87	6749	
Petropavlovsk to			
Paramushiri, Japan ...	170	6919	
Simushiri	190	7109	
Yutorup	290	7399	
Kushiro	186	7585	
Hakodate	174	7759	
Sendal City	214	7973	
Yokohama	182	8155	
Nautical miles 1406			
increase to Statute			
miles 192 to 1598 ...	192	8347	
New York to Yokohama	8347	8347	
Yokohama to			
Shidouka	85	8432	
Nagoya	110	8542	
Kioto	100	8642	
Osaka	50	8692	
Okayama	130	8822	

	Miles	Miles
Moji	190	9012
Saishuto Island (Japan Sea)	244	9257
Shanghai, China (Yellow Sea)	357	9612
Total Sea Japan to China 601 Miles		

An alternative route by way of Korea and Manchuria is offered which largely follows the route of the Rome-Tokyo flights as does the favored route south from Shanghai and up to the arrival of the travelers at Rome. The continued route from Rome to New York follows :

Rome to	Miles	Miles
Nice	354	18033
Marseilles, France ...	114	18147
Paris	414	18561
London, England ...	211	16772
Cork, Ireland	353	19152
Dummary Head	82	19207
St. Johns, N. F.	1875	21082
Halifax, N. S.	550	21632
New York	575	22207

The route from New York eastward follows over the same course, all of which at the present time, is by necessity a tentative arrangement subject to the final deliberations of the commission on their arrival in New York after the completion of their circle of the globe.

The part China is to play in the air derby, which is for the encouragement of aviation and to illustrate the possibilities of flying and tran-continental and transoceanic air commerce, from the reception given the commission would seem to be large. While in Peking, Dr. John C. Ferguson, adviser to the President of China, was appointed special commissioner for China to work in conjunction with E. W. Frazar of Tokyo, who has been appointed commissioner for Japan and Korea.

General W. S. Y. Ting, Director of Aviation for the Republic of China, conferred with the commission and assured them of the support of the air forces of the nation and also intimated that China would attempt to put at least ten entries into the circuit race from Shanghai to Shanghai. Other governmental officials endorsed the work of the commission.

All information regarding the particulars of the derby in China and elsewhere will be placed in the hands of Dr. Ferguson, who may be addressed at Peking. The general plan of the derby follows :

“The First Aerial Derby Around The World will be in the nature of a touring contest in which any person may participate.

“They may use both aeroplanes and dirigibles for air travel and are permitted to use ships, railways, automobiles and other means of transportation to make connections between countries but the greatest and fastest average air mileage wins the master prizes.



Major Charles J. Glidden, Executive Secretary, and founder of the Glidden Tours and donor of the Glidden Trophy.

“A long period of time will be allotted for the journey and certain zones of travel will be fixed. The contestant may consume the entire time allotted to make the trip and fly or engage passage for flight under conditions agreeable to aerial travel, that is, he may fly from one point to another on one day, continuing at his pleasure on to the next point, his time being officially taken by the Referees at point of starting and stopping.

“The contestant will be under absolute control and direction of the Referees appointed, who must be native citizens of the country in which the contestant is travelling.

“It will not be necessary for the contestant to own an aeroplane, flying boat or dirigible, as he is privileged to engage passage in any aircraft available, and it is hoped the commission may be able to arrange aerial transportation across the Atlantic and Pacific Oceans whereby several of the contestants may go together.

“The object of the Commission is to create a world wide interest in aeronautics and air travel, the building of safe landing fields and airports, the establishing of controls and appointment of Referees to check contestants in and out, and to collect data for the establishing of permanent aerial lines throughout the world.”



Benjamin Hillman. Treasurer of the Commission, a retired New York Business Man.

SIMPLICITY OF DESIGN MARKS BRITISH CARS.

**Recent Olympia Show Characterized by
"Allweather" Bodies and Elimination of Excess Parts.**

Extremely simple lines of body construction and the simplifying of the mechanical details characterized the recent Olympia show held in London. Many mechanical improvements, a reflection of the wartime experiences of the motor manufacturers and the new lines of American construction, were evident. The following is a brief account of the more salient points of the show as recorded by a London correspondent:

When one embarks upon a tour of Olympia in an endeavour to observe the main tendencies of design, the first thing that strikes one is the general simplicity of appearance both of the car and of the bare chassis. In superficial appearance the lines of the complete car are extremely simple, and there are comparatively few examples which depart far from the conventional. Thus, in some instances, manufacturers who have hitherto fitted radiators of unusual shape or in unusual positions tend to change in the direction of the normal. The lines of the complete car flow in regular curves from front to rear. In most cases the resulting appearance is very good, and from the practical standpoint the motorist is relieved of the duty of cleaning out inaccessible corners or the details of unnecessary decoration. The appearance of many open cars is improved by concealing the hood and the comfort by the lowering of the seats, which allows the sides to afford fuller protection to the passengers. Many motorists who want cars both for town and for country work and have hitherto maintained separate vehicles for each purpose are not, in view of increased prices, disposed to assign both duties to the same car. This is one of the factors which cause particular attention to be devoted to what is often called the "all-weather" body, which allows of prompt conversion from the completely open to the completely closed car and vice versa.

The finish and general appearance of many of the car bodies at Olympia are remarkably fine, and certainly were not excelled at the recent Paris Exhibition.

Turning to the bare chassis, the simplicity of appearance already remarked is due to the elimination of unnecessary details, to the enclosing of working parts for their better protection, to an effort to reduce the number of points at which lubrication or other attention is required, and to the use of improved materials which permit many parts to be reduced in thickness without suffering in strength. The only item in which there is an appearance, but not necessarily a reality, of increased solidity, is the wheel. The use of disc wheels is obviously becoming more general, and this refers to the genuine disc wheel as distinct from the disc used merely as a dust cover. On the most expensive cars wire wheels are generally provided. On the great majority

In addition to their work as the pioneers in laying out a world course in the air, the members of the commission are widely known in their own country, the United States, for their other achievements and interests. Commodore Louis D. Beaumont is best known among the Allied air forces for the Allied Aviators Club, which he established and maintained on the Champs Elysees in Paris, and the club at Colombes les Belles on the American front. He also subscribed the full sum for a monument to Wilbur Wright at Le Mans, France. The entire expense of the commission in its work is being paid personally by Commodore Beaumont.

Major Charles J. Glidden is well known to motorists through the Glidden tours and the Glidden trophy which was competed for by the best racers in the motordom of America for a number of years. He has also motored twice around the world visiting thirty-nine countries, and was a pioneer in the development of the telephone and telegraph systems of the United States. During the war, he was at the head of one of the examining boards of the air forces of the United States Army and passed on the mental qualifications of 6,000 fliers.

of cars at all prices either the wheels are detachable or the rims demountable.

With a few exceptions in which some unusual construction is employed, the main change in respect of frames is that they are appreciably lighter than they used to be without being any less stiff. The suspension system has received a great deal of attention and the result of scientific investigation appears to be the very widespread adoption of the cantilever spring, even on cars of very moderate power and price. In transmission one notes a tendency to employ spiral bevel drive to the back axle, though this is nearly always found on the more expensive cars, since the highest accuracy and the best possible material are essential to success. Working forward to the gear box we find that the provision of four forward speeds is becoming more and more usual, and that the use of ball bearings to the gear shafts is on the increase. In a good many instances the mechanism of the gear-control is simplified by placing the change speed lever in a central position—that is to say, to the left of the driver. The main claims for this practice are the simplification of mechanism already mentioned and the fact that the method makes for easy access to both of the front seats. Some drivers, however, dislike using the left hand for gear and brake control and the arrangement is, of course, very awkward if the front seat has to make room on occasion for three occupants. There is no very noteworthy change in the general design of steering gear or of front axles, and we may therefore now turn to the heart of the car—the engine.

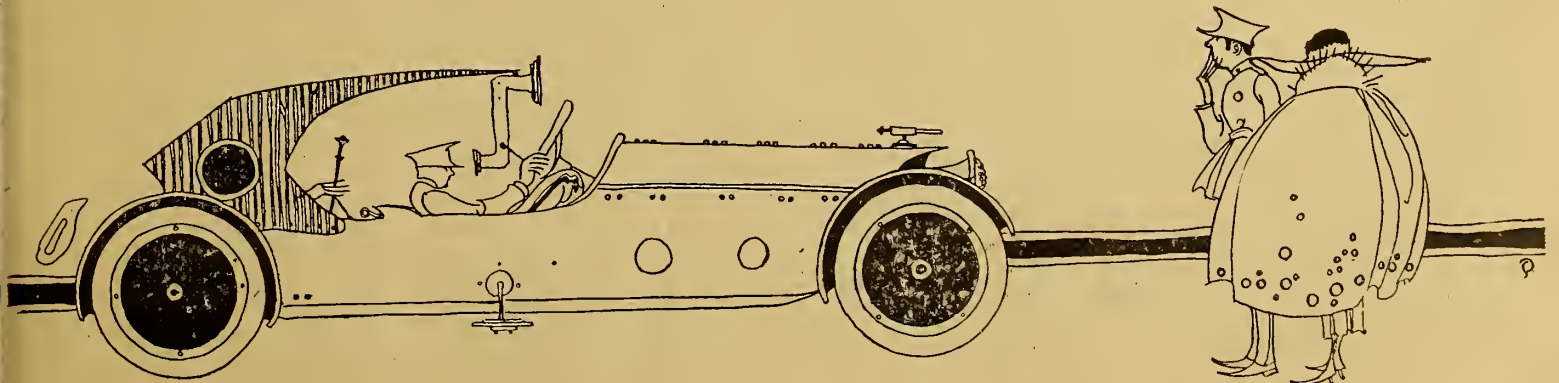
Undoubtedly the first thing one notices as a result of examining a large number of engines of post-war models is the very considerable influence of the aero engine upon car engine design. This is to be found in a number of forms. There is, for instance, the tendency to employ aluminium cylinders with steel liners. Detachable cylinder heads are fitted in many cases. The detachable head for the whole engine is often formed in one piece and carries the overhead valves and their operating shaft. In other instances the overhead valves are worked through overhead gear and a camshaft in the usual position at the side of the engine. The overhead valve owes its very marked increase in popularity largely to the employment of tungsten steel, the use of which makes the valves practically unbreakable, so that we have

got rid of the old danger of valve heads dropping into the engine. The efficiency that can be obtained with overhead valves is, of course, extremely high, and is one of the reasons why the post-war engine gives better power for a given weight.

There are one or two examples of V-type 8-cylinder engines and other examples again of 3 and 5-cylinder engines in which the cylinder arrangement is that of the radial aero engine. There are several examples in which air-cooling is used in engines of moderate power, capable of rotating at very high speed. Here again we see the influence not only of aero engine development but of improved materials, making it possible for engines to work consistently at comparatively high temperatures.

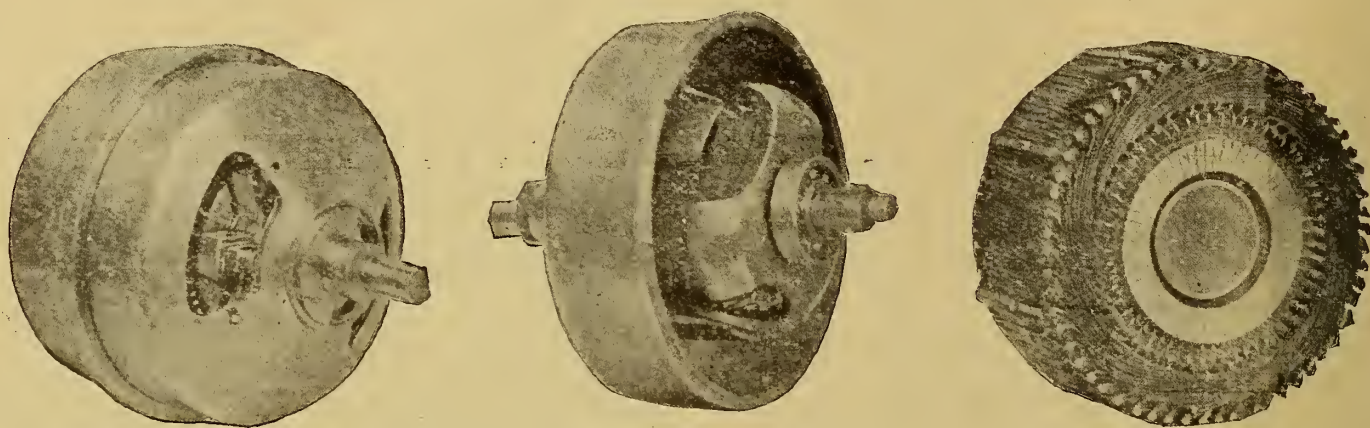
The use of the vacuum feed for supplying fuel to the engine is now practically universal, except in a few very highly priced cars, in which pressure feed is carried out with the utmost refinement calculated to give the best possible results. A good deal of attention has been directed to lubrication. Pressure feed of oil is, of course, usual and effective. Generally speaking, designers aim at relieving the owner-driver of the responsibility of frequent attention to a number of points at which lubrication may be needed. The cooling system of the average car calls for no special comment here. In a few cases very large water jackets are provided. Radiators are generally adequate to secure satisfactory results in very hot climates. Thermo-static control of water circulation does not appear to be gaining ground, being, perhaps, better in theory than in practice.

In electrical equipment, one finds among British cars only a very slight tendency as yet to abandon the magneto in favour of battery and coil ignition. Unquestionably we cannot better the magneto but there is, of course, a possibility of reducing cost by eliminating it. It is not safe to depend upon the battery and coil system unless a really satisfactory lighting equipment, with a good dynamo and an ample battery, is provided. Nowadays the battery almost always has to take charge of the additional duty of operating an electric starting motor. In the new designs both lighting dynamo and starting motor are properly worked in as component parts of the complete chassis, instead of being hitched on wherever space could be found and regarded as extras. Their inclusion in the standard product is, of course, one of the causes of increased price.



AN ELECTRIC WITH SPEED.

American Inventor Builds Car With Own Re-Charging Plant.



The Motive parts of the Electric Car, Showing Exterior and Interior Details.

An "Electric" that will make over 25 miles an hour and will run to an indefinite distance, because it carries its own re-charging plant, has been devised by an American inventor and is described in "The Scientific American" (New York, October 25) in an article entitled "A Fresh Deal for the Electric Car." Among other things, a saving of 50 per cent. in fuel mileage is claimed for this car. At the outset, the writer of the article gives in brief space a summary, which he says represents the average man's idea of the present electric car. It is, he says, "an ornate chariot travelling at the leisurely pace of 15 miles per hour; a storage battery that runs the car for only 35 miles, after which it is necessary to recharge it; low mileage at high cost; a heap of trouble in the form of batteries that must be watched and nursed lest they get discharged below the safe point or run out of water; a car that is chained to one's immediate locality because of the re-charging problem." It is difficult, he says, to argue to the contrary; for the average man knows the electric car of bygone days only, and insists on comparing this with the gasoline car of 1919. He goes on:

"So the average man is asked to consider these points: A car that makes 25 miles an hour and even more; a car that can go anywhere, because it carries its own re-charging plant; a car that generates current whenever it coasts downhill, a car that carries improved storage batteries, requiring the minimum of care; a car wherein the motor and transmission members, forming one unit, can be taken off in one block for inspection, repair, or even replacement. These features are all to be found in the latest electric car—one which seems likely to give the electric car a new deal in the automobile game.

"The car in question has been developed over a period of many years by Harry E. Dey, of Jersey City, and has the hearty endorsement of Dr. Charles P. Steinmetz, the well-known electrical engineer. The most revolutionary feature of Mr. Dey's car is the motor, in which both armature and field magnet are rotatable, one element being connected to one driving wheel by way of a pair of reduction gears, while the other element connects with the other wheel in similar manner. It is in this way that the designer dispenses with differential gears; the motor with its independent rotation of parts makes a perfect substitute. In addition to saving the expense and weight of a differential gear, this construction cuts the number of parts and increases the capacity of the motor 100 per cent. for a given gear reduction. This reduces the weight 50 per cent. for a given power, and also increases the electric efficiency. The size of the motor is still further reduced by turning it inside out, as it were; that is to say the armature, in the form of a Gramme ring, encloses the field magnet, permitting the latter to have six poles all energized from one field coil. This field is of a design ideal for efficiency and light weight, its weight, including shaft, totalling but $19\frac{1}{4}$ pounds. Its iron portion is well adapted to drop forging and easy machining. The total weight of the motor, which has a capacity equal to the ordinary automobile motors of 150 or more pounds, is only 50 pounds. . . .

"Caps covering the gears hold the power-plant in place, while an aluminum cap covers the motor. These caps are held in place by a pair of taper rings that can be removed in less time than would normally be consumed in removing a single bolt. In this fashion the entire outfit can be dismantled in about two minutes. This car may well

be called the "nutless" car, as remarkably few of these are used in its construction. As the current is taken to the motor through springs there is no necessity for disconnecting any wires when removing it. In case of an accident to the parts, another motor or gearing can be got at the service station, and exchange effected in a few minutes."

The first car built by Mr. Dey had hand-operated control, in connection with a steering wheel. This was found to be an undesirable combination, in heavy traffic; for in an emergency both hands are required on the wheel and it takes time to shift the hand from wheel to control lever. In the latest design the operation of the control is similar to that met on a gas car. He continues:

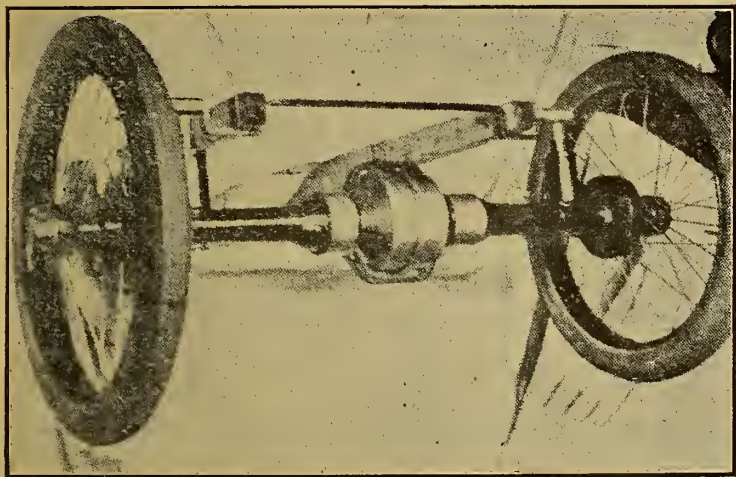
"For speed variation a foot lever acts in the same way as a clutch, with the added feature that pressure beyond that to cut the current off impels the motor to act as a brake, while extreme use of the foot power applies the mechanical brake to the driving wheels. In addition there is an emergency brake. An accelerator pedal raises the speed to 30 miles by weakening the field. A third pedal gives forward, reverse and neutral. This is so interlocked with the speed pedal that it can be moved only when the latter stands in a high resistance or the off position. . . .

connected to a special dynamo. It will charge the battery at any time, whether the car is running or standing, at a rate equal to the normal consumption of the driving motor, which experience has shown to be two horse-power. This plant causes a net saving in the weight of the car of more than 100 pounds, due to the fact that one half the battery can be dispensed with, a 50-mile battery radius then being sufficient. If desired the plant may be removed from the car to be used as a stationary unit for re-charging, as well as for charging a separate battery for house-lighting, etc. It is a simple matter to place the power plant in the car against a long trip. The smaller battery required will largely cancel the additional cost of the charging plant.

"According to Mr. Dey there will be a large saving in gasoline expense as compared with the gasoline car, since in the electric car as here developed the engine is continuously operated at the maxim-efficiency load. Gasoline cars are admittedly wasteful, because their average load hardly exceeds one-tenth of their engine rating. From careful calculations Mr. Dey estimates a saving of 50 per cent. in fuel mileage, using his gasoline-electric system."

REASONABLE AND PROPER.

It is reasonable and proper that a thoroughly creditable substitute for gasoline should be placed on the market at a higher price than gasoline, and that there should be advanced on behalf of it certain claims for properties that the ordinary gasoline of commerce does not possess. A substitute introduced under other circumstances, at least with general conditions as they are, could hardly be considered a creditable substitute. For all practical purposes the gasoline producer may be judged by the measure—more familiar to the automobile man—of the tire manufacturer. Substitutes for air in pneumatic tires have not been put on the market by the leading tire makers because, in the ripeness of their judgment, the air-filled tire is the best and most economical all round. The petroleum refiners, on the other hand, instead of conspiring to keep up the price and keep down the quality of gasoline, are actually spurred by the keenest rivalry to improve the product and lower its cost, since by that means only can their business be increased. The so-called "airplane gas," sold by some of the refiners, is an instance of competition introduced on the basis of the appeal of better performance. The new "alcogas," first discussed some six months ago, illustrates the well-known commercial possibility of producing a better automobile fuel than gasoline at a higher price. The apparent advantage of the new fuel is that it offers the possibility of running about thirty per cent. farther on a gallon at an increased cost of about twenty-five per cent. Another advantage of the latest substitute is that it doesn't smell of moth balls.—Automobile Topics.



Showing Rear Axle Construction.

"A radical departure has been made in the spring suspension, as air springs have been substituted for the elliptical type. These are the same in principle as those employed for many years on the cushion-frame bicycle. The construction is similar to that of a tire pump, with the addition of a helical spring inside the cylinder. The spring takes care of the static load, while the air takes up all the shocks. A small air leak does no injury, for the spring will bring the load back to its normal position and the air will return, in the same way it went out. Above the piston there remains a space in the cylinder where air is compressed on the rebound. . . .

"Mr. Dey has largely increased the scope of his car by designing a portable charging plant, weighing approximately 100 pounds, to be carried under the bonnet of the car. It consists of a light 3-horse-power air-cooled gasoline engine

PLANES SAFER THAN AUTOS, SAYS MARTIN.

Comparing Recent Aerial Derbies with Indianapolis Speedway Contest, Builder of Bomber Contends That Flying Is Not Dangerous.

BY GLENN L. MARTIN.

(Mr. Martin is a pioneer American flier and builder of airplanes who as long ago as 1912 made the statement that an airplane was safer than an automobile, providing the automobile was driven faster than thirty miles an hour. He is the builder of the 800-horsepower Martin Bomber, in which Colonel R. S. Hartz flew around the rim of the United States).

The recent New York-Toronto and New York-San Francisco aerial races have developed the fact, startling to most people, that as far as speed contests are concerned the airplane is not only faster than the automobile, but from the standpoints of safety and reliability has it all over the motor-car. The deaths and injuries per mile are not only smaller, but the percentage of contestants finishing is greater in aerial racing and this despite the unquestionable fact that the conditions under which the two kinds of speed contests are conducted vastly favor the automobile.

Let us compare the conditions under which the air and speedway races were held. In the first place, take the matter of distance. The New York-Toronto event covered 1042 miles and the New York-San Francisco contest 2701 miles, whereas the longest automobile contest of the year was the 500-mile race on the Indianapolis Speedway. The advantages in favour of the automobile and its driver are obvious, as the strain on men and machines is manifestly greater than the distance traveled.

In the second place, consider the physical condition of the course. The automobile speed kings on a bright, clear day, after weeks of practice which had made them familiar with its every well-paved inch, circled a banked course which, at a cost of hundreds of thousands of dollars, has been prepared for them. In their pits were high-priced racing mechanics with expensive tool kits and a vast heap of spare parts. In other words, at Indianapolis conditions were as nearly ideal as ten years of racing experience could make them in order to insure perfect performance from men and machines.

Think over these conditions, which in every respect favored the automobiles and their drivers, and then look at the following facts. In figuring the machine-miles per death I have figured the full distance, of course, for the machines which finished and half the distance as a general average traveled by the machines which failed to complete the course.

INDIANAPOLIS AUTOMOBILE RACE.

Distance—500 miles.

Highest speed—110 miles per hour.

Winning average—88 miles per hour.

Machines started—33.

Machines finished—15 (45 per cent).

Deaths—3 (4,000 machine-miles per death).

NEW YORK-TORONTO AERIAL RACE.

Distance—1042 miles.

Highest speed—135 miles per hour.

Winning average—128 miles per hour.

Machines started—52.

Machines finished—30 (59 per cent).

Deaths—0 (42,722 machine-miles and no deaths).

NEW YORK-SAN FRANCISCO AERIAL RACE.

Distance—2,710 miles.

Highest speed—135 miles per hour.

Winning average—120 miles per hour.

Machines started—62.

Machines finished—31 (50 per cent).

Deaths—7 (17,940 machine-miles per death).

And now for a comparison, remembering all the time that the aerial races each had nearly twice as many contestants as the automobile event and that they were respectively twice and five times as long. In other words, in the transcontinental air race, all other conditions forgotten for the moment, the number of entries and the distance traveled gave ten times the opportunity for accidents and failures that the Indianapolis race gave. The speed figures show that the flyers traveled faster than the motorists, so that the strain on airplane and engine was quite as great as that on racing car and engine. Yet the greater percentage of flyers able to complete the course despite bad weather, bad fields and inexpert pit service shows that wonderful strides have been made in the construction of airplanes and airplane motors and speaks volumes for the ability of the pilots to nurse their engines along.

The deaths, while by no means a pleasant topic, furnish by all odds the most interesting and illuminating comparison of all. Out of thirty-three starters at Indianapolis, three were killed during the 500 miles. In the transcontinental air race, with nearly twice as many started over a course five and one-half times as long, seven lives were lost. In other words, the figures indicate that had an equal number of automobiles and airplanes been racing over a distance of 2,700 miles and the deaths continued in the same ratio as at Indianapolis, thirty out of the sixty-two automobile drivers would have been killed, whereas only seven aviators lost their lives. Such figures, are, of course, only theoretical, but the fact remains that any way you want to figure it the deaths

BY WAY OF DIVERSION.



A portion of a recent Shanghai Paper Chase showing the place of the Motor Car in the Sport.

per mile in automobile racing outnumbered the deaths per mile in air racing, despite conditions which greatly favored the motorists.

However, in my opinion, it is hardly right to compare air and automobile races, in view of the fact that the general conditions and purposes are not identical. The United States Air Service had a number of purposes in mind in staging the New York-San Francisco aerial race. These purposes, I think, can be divided under two main heads—experimental and educational. The race has served to lay out the first transcontinental air route in any way resembling the aerial high-ways of the future. The experiment of laying out a course with stops at intervals of not more than 180 miles and then having the pilots find these spots by means of maps, compasses and general sense of direction was successful, and what the possibilities of transcontinental aerial travel will be when these fields are properly levelled off, connected up by emergency fields between them and then flown over by pilots familiar with their every feature, just as locomotive engineers know every bend in the rails, can be imagined.

LANDING PLACES NEEDED.

The educational purpose of the event was, first—to stir up a general interest in aviation; second—to show what has been accomplished and what strides in the art of flying have been made; third—to awaken the American people to the possibilities of aviation commercially and the necessity of

taking the proper steps to insure the continued advancement of aviation. These three purposes have undoubtedly been well served by the race. There is no question but that more people are thinking and talking aviation now than ever before. It is equally true that the crossing of the continent by half of those who started and the remarkable individual performance of Lieutenant Maynard were splendid proof of the strides that have been made in perfecting the art of building and operating aircraft.

The greatest danger to aviators right now, and the chief hindrances to the progress of commercial aviation, is the lack of proper landing facilities.

HILO HAS AUTOMOBILE CLUB.

The first number of "three Speeds Forward" the official publication of the Hawii Automobile Club, Hilo, has been received by "The Oriental Motor." The publication is in newspaper form and gives the principal activities of the Club, which includes road mapping, road signs, good roads campaigns and traffic ordinances. The Club has been affiliated with the American Automobile Association.

The latest prices and specifications of the principal American and British motor cars are always at hand in the Motor Car Prices and Specifications Department of "The Oriental Motor"

The Oriental Motor

A Monthly Publication Devoted to Motor Interests in China and the Far East Generally.

PUBLISHED AT FIVE HONGKONG ROAD, SHANGHAI.

London Representative—Mr. C. Cokayne-Naylor, 36-7-8 Southampton St., Strand, W.C.

Subscription rates: Mexican \$3.00 for Six Months or Mexican \$5.00 for One Year in China and Japan, payable in advance; Foreign Countries, Mexican \$6.00 Yearly; Single Copies, Mexican \$0.50 each.

Advertising Rates on application.

NOTICE TO CONTRIBUTORS.

The Editor will be pleased at all times to receive photographs, sketches or articles of character likely to be of interest to readers of this publication. It is understood that contributions will not be paid for unless remuneration has been stipulated and arranged for in advance.

All correspondence should be addressed to the Editor, The Oriental Motor, Five Hongkong Road, Shanghai, China.

American mail should be addressed to The Oriental Motor, United States Postal Agency, Box No. 749, Shanghai.

Registered at the Chinese Post Office as a Newspaper.

Vol. I.

SHANGHAI, JANUARY, 1920.

No. 10.

EDITORIAL.

(THE ORIENTAL MOTOR wishes it to be understood that it is not in any way connected with any motor company of similar or any other name and that it is absolutely independent of any commercial company or organization whatsoever and also that it is not in any way affiliated or connected with any printing establishment).

COMMERCE AND MOTOR TRUCKS.

Interwoven in the great commercial fabric of the nations, the huge ever growing thread of motor trucks is pushing forward as a dominant note in the design. Added impetus to the development of motor truck transportation has been given by the Herculean performance of the motor freighters during the war—by the steadiness and dependability of the long trains which rumbled their ways over the roads of France so that the Allied armies might not lack in supplies for their advances.

Recognition is now being given to the motor truck as a builder of business and commerce by means of increased efficiency in transportation. This recognition is becoming world wide and Shanghai and China in general are just beginning to feel its results.

Within the past few months Shanghai has acquired commercial motor truck transportation systems and innumerable private firms have adopted the motor driven freighter as a means of solving their carriage problems.

There still remain, however, the doubters who cannot be

brought to see the possibilities of future development and the reasons for the utilization of the motor truck. These persons give no attention to the decrease in loss and breakage, the increase in tonnage and the vast possibilities of rapid delivery.

Motor trucks follow commerce and just as surely and certainly as commerce is developed, national or international, in any section of the world there will also be found motor trucks. International rivalry in China is bringing commerce on a higher plane of closer competition and this same factor will bring out the necessity for utilizing every means of efficiency known to the world of business—will make the motor truck population of China greater and more extensive.

With the coming of good roads in China, the motor truck caravan will be the principal means of transportation and the business interest which does not recognize this will be relegated to the scrapheap by the advancement. Before the coming of good roads, business concerns in Shanghai will be forced into recognition of the services of the motor truck by the necessity of more modern business methods.

The commercial struggle is on and those coming out uppermost will bring with them motor trucks. Investigate their possibilities, ask others what has been accomplished with them and add motor trucks to your assets.

CHINA'S CRYING NEED—ROADS.

With the return of the nations of the world to a peace time basis, intensive road building is occupying the minds of the various governments. From Great Britain comes the information that every possible impetus, including the appropriation of large sums of money, is being given to the construction and repair of the highways.

Again from the United States reports tell of small counties which are pledging themselves to bond issues running into the millions to make permanent their sections of the national highways, the allotment of motor trucks used during the war by the United States Army to road districts for use in building and the authorization of Congress for large sums to be used in cooperation with the states in making the roads of America second to none.

In this motor driven age when almost one out of every ten persons in the Western world is either a motor owner or the member of a family owning one, national highways are a necessity. National highways are building more closely cemented nations, increasing commerce and broadening the scope of vision of the nationals.

Yet at this time of greatest development in the making of roads, China lays dormant. If any nation in the world needs roads, good roads and national highways, it is China. Means of communication in the country are inadequate and medieval, transcontinental travel is only possible by water at the rim of the country while the great heart of the nation is still inaccessible to any mode of transportation except the most primitive.

Where would the United States have been to-day had not national transportation means been utilized to the greatest

extent? Where would Europe have been? Each stand among the forefront of the nations of the world because of national highways.

There are constant discussions of how China may be helped to help herself. Yet with no advocate of progress in China has offered a feasible and workable plan for the building of a national highways system, which is one of the country's most crying needs.

China can never become a nation until her roads are developed. China needs travel and travellers and no more practical means of getting them can be found than good roads. With them the penetration of the interior both for commerce and pleasure would mean a few hours or a few days by motor. The people of the interior would be brought into touch daily with motors and motorists from all sections of the nation. They would begin to realize that there are other parts of the country other than their own province and city and the great welding influence which would make China a nation united would begin.

Loans are being made to China for various purposes but none stipulate the building of roads. Mention is made of pensioning the office holders under the Manchu regime. How does this compare with the issue of highway construction?

If China has Western friends who are interested in her development, and undoubtedly she has, the time will not be long in coming when a loan will or should be contracted which will build without "squeeze" and graft a great system of national highways, which in turn will attract tourists and commerce enriching the donors and benefitting the nation politically and financially.

ROAD AND BRIDGE IMPROVEMENTS.

Shanghai like every other modern city of the world—and it seems to be a sign that the city is progressing—has some of her streets or her bridges under the process of improvement during the entire year. But Shanghai unlike most modern city tears up but takes her time improving and replacing.

One of the most flagrant examples of this hesitancy and time wasting in replacing is the present work on the Chapoo Road bridge which crosses Soochow Creek. This bridge has been under the process of minor repairs for four weeks and is just finished.

The bridge was apparently torn up, then the measurements were taken for the needed flooring and piling timbers, the timbers were cut, and finally they were laid one by one and with due deliberation.

The same process may be recalled in the improvement last summer of the bridge over the creek at Szechuen Road, where traffic was blocked and detoured for weeks while the structure was undergoing a replacement of the flooring and a few piles. In other cities new bridges are built in less time than it takes to replace the flooring in bridges of Shanghai.

With the present traffic problems of Shanghai it would seem that more modern and efficient systems of the improvement of roads and bridges would be adopted and floor replacements and what not done with more speed and less procrastination.

UP IN THE AIR.

Shanghai and China are getting up in the air—not meaning that this trend of events is due to any frustration but to the development of aviation in the world.

Following close upon the announcements that Shanghai would be made one of the more important air ports for the Rome-Tokyo flight of the Italian Government and of the air derby around the world now being organized by the Aerial League and the Aero Club of America, comes the formation of the Aero Club of China in Shanghai.

The formation of this organization is merely indicative of the fact that Shanghai is progressing with the rest of the world. One pleasure aircraft has already made its advent in the city and five Italian planes have been winging their way overhead for the past month.

There is room in the city for a large international Aero Club and now that the preliminary steps have been taken, it should receive the support of civilians and flyers alike.

No greater advertisement for the city of Shanghai could be conceived than the entrance from the city of an aviator in the round the world derby by air and if the newly organized Aero Club of China is able to accomplish this in its first year it will have more than won a permanent place in the affairs of the city and of the country.

REVISED CAR PRICES.

Attention is called for the readers of "The Oriental Motor" to the department of motor car prices and specifications which is printed elsewhere in this issue.

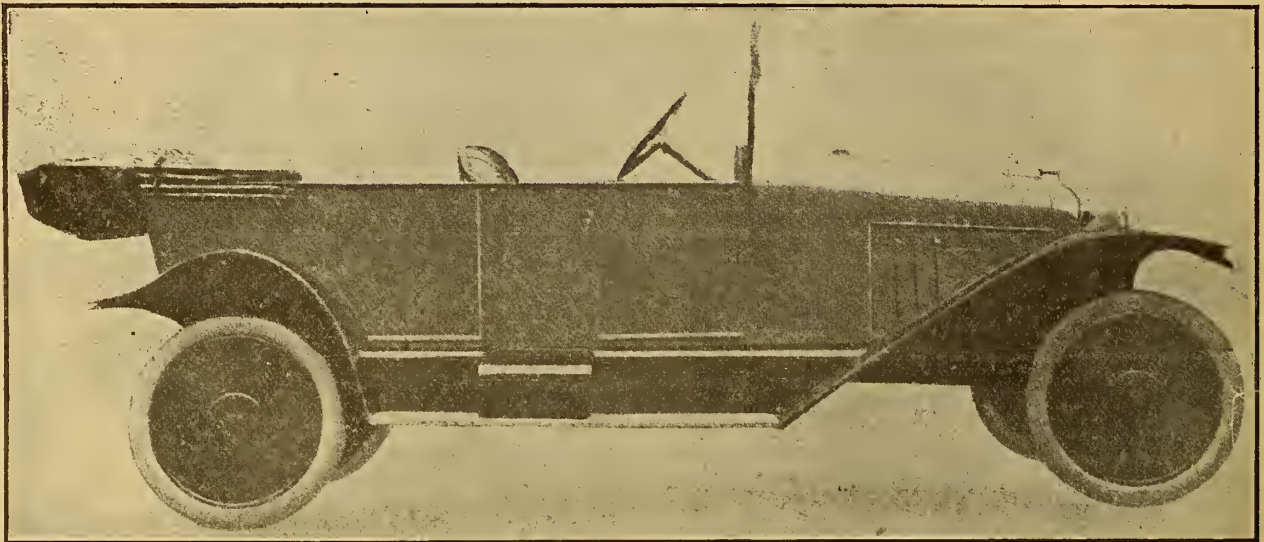
The prices and specifications have been revised and added to and are now as up to date as information at the time of going to press permits. British car prices, which have been in doubt since the close of the war and the renewal of manufacture on a peace basis, are published as they come direct from the manufacturers. A few of the prices of British makes are subject to revision.

Within the next few months, "The Oriental Motor" will be able to give also the prices and specifications of the latest French and Italian motors. It is intended that this department be an announcement of the principal makes, and their prices and specifications of all of the motor cars of the world.

OUR SYMPATHIES.

"The Oriental Motor" extends its sympathies to the publishers of American motor car journals for their difficulties during the recent typographical strike. Although every make shift has been employed they are publishing only "semi-occasionally."

THE FRENCH FORD.



The Citroën, a Mass production car, which has excited much comment and speculation at recent English and Continental Motor Shows.

TRUCK PERFORMANCE CAN BE GAUGED BY TON-MILEAGE.

Owners Have a Simple Way of Computing Operating Costs and Comparing Method of Hauling.

More and more the business interests of Shanghai are turning to the motor truck as a solution of their transportation within the city. Truck information and truck data is of absorbing interest and there are many phases of truck transportation which the owner should know.

Ton-Mileage is one of the things a truck owner ought to know how to compute in order to be able to make proper estimates of truck performance. When he can figure out the ton-mileage of each of his trucks he is in a position to compare the cost of the various makes of trucks in his fleet or to compare the cost of truck haulage with horse and wagon delivery.

The method of computing ton-mileage is very simple. In making the computation it is apparent that two methods of hauling must be considered, one case being where the whole load is carried the full distance and the other where parts of the load are taken off or put on at various points along the trip.

Just as there are these two kinds of loads, there are units of measurement. For the load that is carried the full distance there is the measurement known as the absolute ton-mile and for the load that is dropped piecemeal in the truck's journey there is the commercial ton-mile.

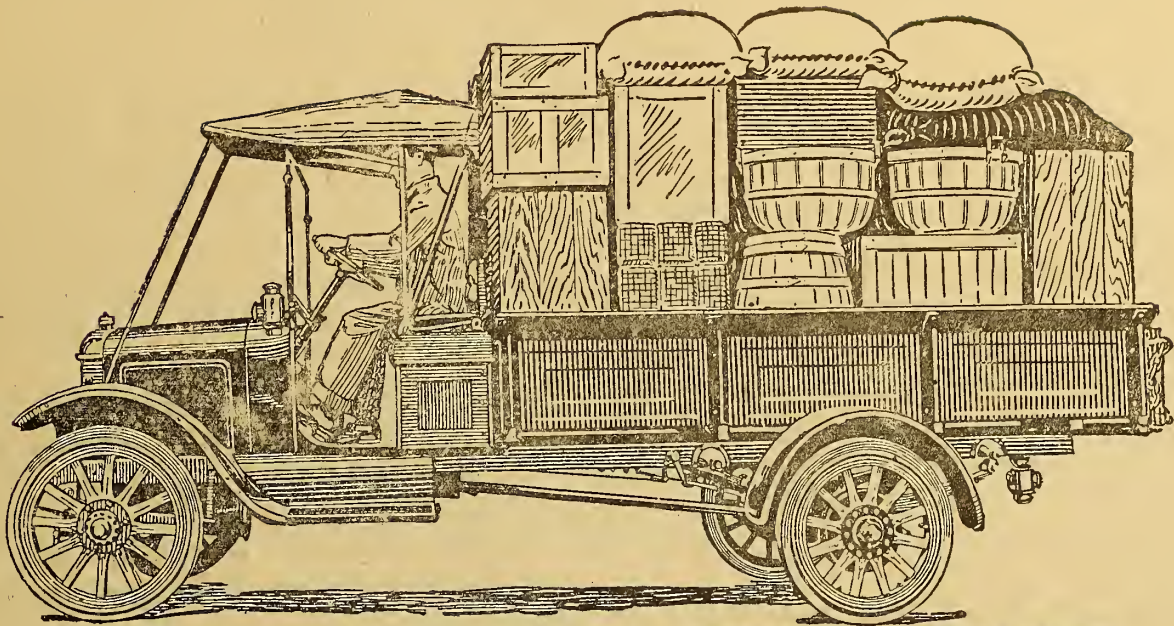
The absolute ton-mile is a ton carried one mile. If a truck carries four tons one mile the ton-mileage is four, or if one ton goes four miles the ton-mileage is four. Four tons carried four miles make sixteen ton-miles. This method

of computation is so simple that the truck owner can readily work out his ton-mileage on trucks that leave the whole load at the end of the trip.

But for the trucks that make partial deliveries the commercial ton-mile has been adopted as the unit of measurement. As most trucks operate under this plan this is the unit which will be employed in most cases. In order to obviate the necessity of weighing the goods taken off at each delivery a simple rule of averages has been devised which gives the ton-miles with sufficient exactness for the purposes required.

The first step in arriving at the ton-miles on such a trip is to compute the average tons. This is found by dividing the number of tons hauled by the number of deliveries. If a truck carrying four tons made five deliveries, the average tons for the trip would be four-fifths. This result multiplied by the total mileage for the trip gives the ton-miles for the trip. For instance, if the truck in question traveled twenty miles, the ton-miles would be twenty times four-fifths or sixteen.

There are some truck operators whose cargoes are entirely of one article—such as barrels, cases, bundles or kegs—and for these the ton-mile unit would not be so serviceable as a single unit of the goods they carry. For these the same measure of haulage may be effected by substituting for the ton the unit best suited to measure their delivery system.



REPUBLIC TRUCKS

**Internal Gear Drive—The Power Behind
Means More Mileage—Less Fuel**

The Internal Gear Drive, used on all Republic Trucks, applies the power between the hub and rim of the wheel. That means increased leverage and more power. It also makes it possible to carry the load on a dead I-Beam Axle, that is not a part of the driving mechanism.

But the Internal Gear Drive is only one feature of the many that have created such a demand for these

trucks. More than twice as many Republics were produced and sold last year as were produced and sold by any other maker.

Weigh that fact carefully when you select a truck. Only the utmost in quality and service could create such an enormous demand.

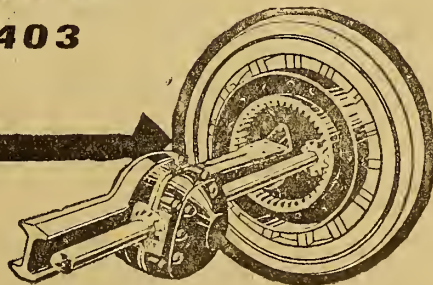
There is a Republic to fit your business from lightest delivery to heaviest hauling.

SOLE AGENTS

THE CHINA GARAGE COMPANY

**TELEPHONE
C. 2403**

**21, Foochow Road
Shanghai**



Power applied between hub and rim of wheel. Load carried on dead I-Beam Axle.

NOTES FROM HERE AND THERE.

Everard Thompson, world scout for the Firestone Tire and Rubber Company, has returned to the United States after a three month's tour of investigation of the field in China. The last month was spent in North China. Mr. Thompson's work included particularly the possibility of the development of a national highway system in the nation.

Carl Davidson, Far Eastern manager of the Goodyear Tire and Rubber Company, and R. M. Shively, who will be in charge of advertising and publicity, have left Shanghai for Manila where they will be located permanently. A complete factory branch will be maintained in Manila by the company.

Ten motorcycles and fourteen motor cars compose the motor population of Canton. A forty miles highway between Macao and Chinshan, in the Heungshan district, has been commenced and will be open to traffic in three months.

Shanghai has as many cars as the entire nation of Greece.

The social event of the year for the American community of Shanghai will be the annual Washington's birthday ball to be given by the American Company of the Shanghai Volunteer Corps. Arrangements are being made and no expense will be spared to make the ball a success.

R. H. Graves, manager of the Asiatic department of the General Motors Export Company of New York arrived in Manila on December 15 on a tour of the Orient. From Manila he will go to Java and India and returns by way of China.

W. D. Hopson, Oriental service representative of the General Motors Export Company with Offices in Shanghai, returned to this city to spend Christmas with his family after a three months business trip in the Philippines. He is leaving in a few days for an inspection trip through North China.

P. H. Gaylor, Far Eastern representative of the J. B. Crockett Company, left on December 21 for Singapore. The Shanghai agency for the Clydesdale trucks, which are exported by the Crockett Company, has been placed with the Shanghai Garage Company.

J. G. Gilfillan of Gilfillan Brothers Smelting and Refining Company of Los Angeles is in Shanghai on the completion of a trip around the world in the interest of his organization.

The proprietor of the Commercial Transportation Company is J. Trevor Smith instead of S. Trevor Smith as appeared in the Oriental Motor of December.

Arthur Walser, export manager of the General Asbestos and Rubber Company, who has been seriously ill in Shanghai, sailed for the United States on December 18.

A native chauffeur was recently sentenced to six months imprisonment by the Shanghai Mixed Court for killing a Chinese on Seward Road.

Over \$45,000,000 worth of motor trucks will soon be distributed by the Secretary of Agriculture of the United States, through the Bureau of Public Roads to State Highway Departments. The War Department has inventoried these trucks as surplus and they will be distributed to the States under the provisions of Section 7 of the Post Office Appropriation bill. They must be used by the States on roads constructed in whole or in part by Federal aid, for which \$200,000,000 in addition to the former appropriation was given to the States by the same bill. All that the States are required to do to acquire the use of these 20,000 trucks, which will range from 2 to 5 tons in capacity, is to pay the loading and freight charges. Of the 20,000 trucks to be acquired practically free by the States 11,000 are new and 9,000 are used, but all are pronounced in serviceable condition.

Take a look each month at the Buyers' Reference Guide of "The Oriental Motor." There will be now information that you will find of value.

It is the somewhat radical assertion of a long-time student of automobile traffic conditions that a car travelling thirty miles an hour is less a public menace than one running at ten. At thirty miles an hour the average driver has his eyes on the road and his mind on the business in hand. At ten miles an hour, however, he is pretty apt to be carrying on a conversation and letting the car run itself.

C. L. Brosseau, who recently joined Anderson, Meyer and Company, will act as a factory representative for the Mack Trucks, made by the International Motors Company of New York City. The first shipment of six trucks will arrive February 1st. They will range in 1½, 2 and 3½ ton sizes.

H. C. Steiner, factory representative for the Goodyear Tire and Rubber Company, will leave Shanghai in a few days for the north. He will be gone for three weeks.

The adequate insurance of your Motor Car is of greater importance than the insurance of your House and Furniture. An accident to your Car may not only entail damage to the Car but may involve you in heavy Third Party liabilities.

UNION'S
COMPREHENSIVE
MOTOR CAR POLICY

Covers at a moderate premium
THIRD PARTY LIABILITY WITHOUT LIMIT
And also fully indemnifies the Assured for
ACCIDENTAL DAMAGE

UNION INSURANCE SOCIETY OF CANTON, LTD.

(Incorporated in Hongkong)

ESTABLISHED 1835.

Policies are issued at the Society's
HEAD OFFICE, Queen's Buildings, Hongkong.

And also at the following Branch Offices in China:

SHANGHAI, Union Building, No. 4, The Bund.

HANKOW, Union Buildings, Tungting Road.

TIENTSIN, No. 6 Victoria Road.

MOTOR CAR INSURANCE A NEEDED PROTECTION.

Motorists Have Been Quick to Realize That Their Automobiles Are Not Complete Without It.

Shortly after the advent of the motor car, numerous accessories which gave added safety, protection and comfort were brought to the attention of the motorist and met with their favour. At about the same time, the owner of an automobile began to realize that in it he possessed a piece of real property that should be protected by insurance just as his tires were protected by guarantees and his motor by a certain standard of performance.

Probably no motorists have realized the necessity of motor car insurance more than the motorists of Shanghai and the Orient due to the peculiar conditions under which motor cars are operated. No motor car in Shanghai is operated without a chauffeur and the Chinese chauffeur has increased the possibilities of accidents and liabilities on the part of the owner and has brought him to realize the value of protection both from a financial standpoint and from the standpoint of peace of mind.

The man who comes to talk insurance seldom receives a cordial welcome. In the first place he directs the victim's attention to subjects that are not altogether pleasant to contemplate, illness, accident and death. In the second place he is urging to payment of a more or less considerable sum of money for something that will not give the payer pleasure or comfort, but merely protection for dependants.

And perhaps the proud possessor of a brand new automobile in Shanghai will feel the same way when we earnestly advise him that he should never take his purchase out on the road until he has fully protected himself and it against any chance blow of capricious fate. Automobile insurance has grown from very small beginnings a few years ago to an enormous industry. When this form of protection is carefully selected the car owner is practically immune from pecuniary loss through accident. No man with a modicum of good common sense will ever take a car on the road without being so protected.

The understanding of what constitutes satisfactory protection in the use of a car does not seem to be generally diffused even in the motoring community of Shanghai. We have met scores of car owners who have covered their cars and themselves with policies and yet who are extremely hazy as to the exact limits of the protection they enjoy. This is absolutely wrong. The car owner should know exactly what protection he has bought. Suppose we glance briefly at what automobile insurance really means and what the car owner should look for in his policy if he is to be really safe.

Automobile insurance may be divided into four major classes. First comes fire risk, which almost every one carries, then collision damage, which covers injury done by the car to another vehicle or other property, theft, and finally liability.

The last is the most important. Damages through fire or collision is limited to the value of the vehicle involved.

Damages awarded to an injured person in the courts may run into the thousand. Several verdicts of this amount have been brought in, and for the ordinary man this means something very like ruin.

Now, liability insurance is the most expensive of the lot. Many men are tempted to "underwrite" themselves and save the original outlay. The only advice to be given any one trying to save money in this way is Mr. Punch's advice to a young man about to be married: "Don't." Put it another way. If one were about to buy a car and yet felt that the added cost of taking out liability insurance was too much for him, we would frankly advise him not to buy a car to operate in Shanghai.

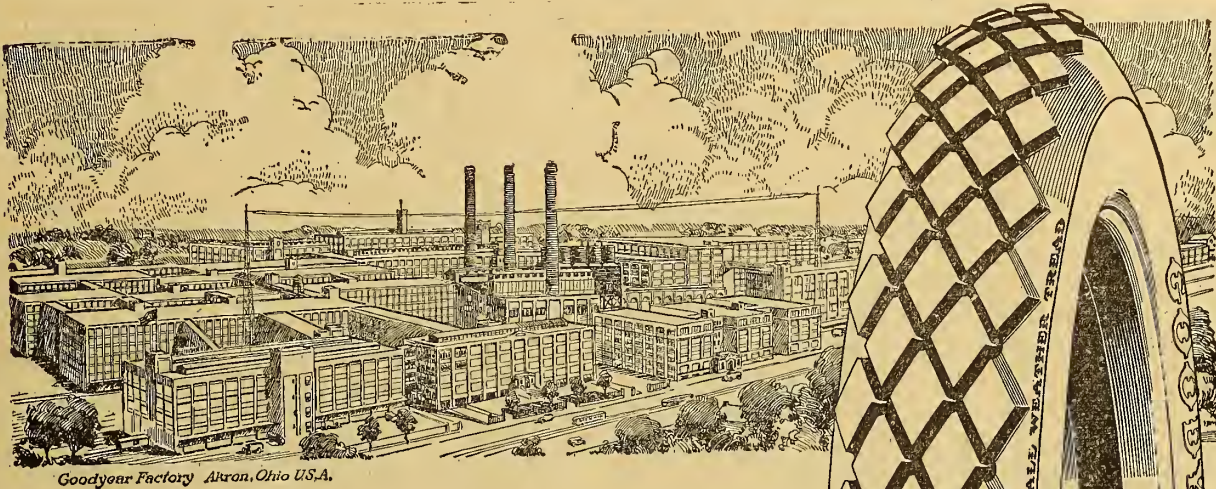
In addition to covering damages assessed by the courts for injuries inflicted, the standard insurance policy places the costs of defending such suits on the insuring company. Such companies have the best attorneys obtainable, as minimizing damages is part of their business enterprise. They also pay for medical attentions given at the time of the accident.

The other classes of automobile insurance are more obviously necessary and almost every car owner appreciates the need for them. Fire is always a possibility about a vehicle that derives its power from a highly inflammable liquid like gasoline. Yet fire insurance is comparatively cheap. There is not much need for emphasizing the necessity for fire insurance, but any car owner who is not so covered should instantly take out a policy.

Collision insurance protects the car against damage suffered in the course of any accident. Any one who has driven much on the congested streets of Shanghai behind a native driver understands the ever present possibility of damage to his vehicle, through no fault of his own and will gladly pay what this class of insurance will cost him.

Some insurance companies write what is known as a "valued policy." That is to say, a definite value is put upon the car and this sum is paid over in case the car is lost through fire, theft or explosion. Other companies have other rules for assessing the value of the lost vehicle and the car owner in taking out his policy should be sure that the writing company makes generous provision in this respect. Appraisers are sometimes a bit whimsical in their methods of placing values on a lost car and the car owner does not want to suffer the annoyance of a lawsuit in addition to the inconvenience of losing his car.

That stock and sterling piece of advice, "Buy only from responsible concerns," holds exactly as must in this purchase of automobile insurance as it does for accessories or the car itself. Patronize one of the well established insurance companies and be sure that the policy you are taking covers all the major classes of liability. The protection and peace of much gained are worth the dollars a year that it will cost you to cover yourself and your car fully.



Goodyear Factory Akron, Ohio U.S.A.

Evidence Simple and Convincing.

COULD all the motorists of China visit the giant Goodyear factories, they would quickly see the reason for the lower cost per-mile of Goodyear Tires.

The evidence, simple and convincing, of the inbuilt merit of Goodyear products is here.

The very atmosphere of these factories is vital with sincerity. No visitor could escape this impression.

Goodyear workmen believe in the ideal to which they build—"Protect Our Good Name."

They welcome the rigid inspection that is given to every manufacturing operation—and *every eleventh man in the Goodyear factories is an inspector.*

It is this manufacturing policy, combined with the equally sincere and fair Goodyear sales policy, which has made Goodyear Tires *the largest selling brand in the world.*

Such a sale indicates the greatest demand—the first choice.

And this never comes except as the result of *proved superiority*, over long, hard periods of test, against all competitors.

Goodyear Tires are made in both millimeter and inch sizes.

Gaston, Williams & Wigmore (F.E.D.) Inc.

Wholesale Distributors

GOODYEAR

TIRES

THE LITTLE THINGS ABOUT YOUR CAR.

It is the little things about your motor car that count just as it the little things in your business that often cause your best laid plans to go astray.

Each month on this page will be published little things about your motor car that you should know—often, knowledge that will save you repair bills.

It is very important that regular inspections should be made of the leather covering or "boots," which protect the universals and other parts. Flying stones or sticks are apt to destroy these boots, permitting the lubricants to leak out and give entrance to dust and dirt. Look them over once a month, anyway.

The life of your engine and car depends upon lubrication. The principle of lubrication is to prevent any two pieces of metal that are working one against the other from touching. This is accomplished by having a film of oil between these two metals. Upon this film of oil depends the life of all your bearings, cylinders, pistons and rings. Fast running over heavy and hilly roads uses up oil much faster than city driving. Put in an extra pint of oil every hundred miles or so. This precaution will avoid trouble with bearings or cylinders. Once a month, or every 10,000 miles, the oil in the crank case should be drained off and a fresh supply poured in. After draining, flush the crank case with kerosene through the breather pipe and refill with clean oil. Be absolutely sure that all the kerosene is drained off, otherwise it will mix with the fresh oil and will cut down its lubricating qualities.

A periodical lubrication of the spring leaves will show a wonderful improvement in their action. Well-lubricated springs save wear and tear on tires and other parts of the car. Many mysterious noises the driver hears are due to dry springs—and dry springs are very likely to break.

Springs are easily lubricated by jacking up the body of a car and separating the leaves with a screw driver or leaf-spreading tool. It is then a simple matter to force in a quantity of oil with a squirt gun.

Few owners pay the attention to the ball bearings that these latter deserve. They usually wait until the garage man calls attention to the injury done by breakage. At least once in six months the ball bearings should be inspected, the rough or worn balls replaced with perfect ones and the ball run filled with graphite grease.

Clutch trouble is one of the commonest complaints among car owners. The clutch throwout collar needs daily lubrication, and in many cars failure to give this, even for a single day, may mean clutch trouble. Give the clutch the lubrication it needs.

Spark plugs require cleaning occasionally, especially since our motor fuel became the debased liquid it now is. The proper way is to take the plug apart and get all the black, carbonized oil and dirt away from the junction of metal and porcelain. The porcelain must not be roughened with sandpaper or a file, as this makes it more likely than before to accumulate carbon. The points should be brightened with emery cloth and the rest of the plug be treated with gasoline and a brush.

Linseed oil mixed with a small amount of graphite is recommended as a lubricant for door hinges and latches, which seldom receive attention in this way. Ordinary cylinder oil has a tendency to run, which is not desirable at this location because the clothes of passengers are likely to come in contact with it.

A cowl squeak may often be traced to a speedometer shaft which needs lubrication. This shaft should be repacked with vaseline or a very soft grease and the operation should be carried out at once, because if the shaft is permitted to run unlubricated for more than a short time breakage will very possibly result.

The average motorist can test the connecting rod bearing of his engine by tapping the bearing caps lightly with a hammer to see if there is any play. The crankshaft should run snugly, but not too tightly, so that it can be rocked by hand when the compression is relieved by opening the petcocks.

In lubricating automobile springs the greatest trouble is found in keeping the lubricant from being squeezed out under pressure. A compound that obviates this is found in graphite and beeswax, mixed to a paste, and spread upon each leaf. Obviously the spring must be taken apart to apply this lubricant.

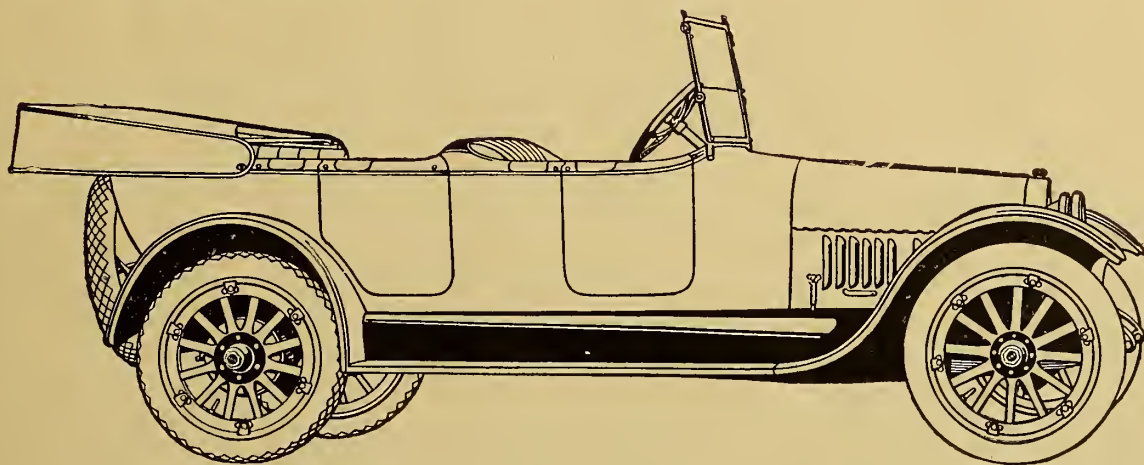
Too few car owners are particular enough in folding the top when putting it down. The folds of material get between the top bows and often are destroyed. With some tops it is essential that all folds be kept from between the bows. This not only lengthens the life of the top, but keeps it in better condition. Too often the top becomes shabby in a few months, whereas if it were given a little care its appearance could be kept longer.

After a car has been in service for some time there is a tendency of the spring leaves to fit somewhat tighter together owing to the smooth surfaces that have been produced. This makes the spring a little more compact by a few thousandths of an inch, but this is enough to loosen the spring clips. These latter parts should therefore be drawn tight after a thousand miles or so of travel in the new car.

If the clutch is allowed to slip very long it will burn the leather, which will necessitate a relining.

When missing occurs in one cylinder at low speed, while the firing is all right when the speed is raised, it is a pretty good guess that the fault lies in too wide a spark gap in the plug of that cylinder.

Beauty
Economy
Comfort



—they are all yours in the

BUICK

VALVE-IN-HEAD MOTOR CAR

Ultra-modern lines have been blended into a distinctive appearance comparable to the most expensive cars.

To ride in a Buick brings a new meaning to light car comfort. Ownership will prove its absolute dependability. Economy starts with the consumption of Gasolene.

Allow us to give you a ride in a Buick. You will then feel the instant power of the Valve-in-Head Motor—its roomy, comfortable seats—steadiness on the road. You will then appreciate the utmost in motor car value.

Immediate Delivery

H. S. HONIGSBERG & CO., INC.,

SALES ROOM

40 BUBBLING WELL

PHONE W. 1234

SHANGHAI

SERVICE STATION

23 MEDHURST ROAD.

W. 1211 PHONE W. 1135

U. S. MAKERS ESTIMATE OUTPUT FOR 1920.

Present Shortage Placed at 2,500,000 Machines—Demand Never Greater.

It is already apparent that every manufacturer of motor cars in Michigan and Ohio, America's center of production will increase production in 1920 from 33 1-3 to 100 per cent. The demand was never greater in the history of the industry, and the industry is confident that it will continue—just as strong for two or more years. Right at present, manufacturers figure, there is a shortage of 2,500,000 cars. By rushing production during the remainder of last year 1,500,000 cars were produced. This production is going to fall far short of the demand, and the industry is facing the problem of double production if it hopes to care for its foreign as well as domestic business.

The automotive industry is investing millions in new plants and equipment and the present investment is going to be but a small figure as compared with the expansion already scheduled for the coming twelve months. In drafting a huge building and expansion program, General Motors has but paved the way for similar programs on the parts of other companies.

All the General Motors units will be able to double production when their present plant construction is completed. Cadillac will have a complete new plant. Scripps-Booth has purchased the new Saxon factory and will move into the same as soon as the lease the Government holds expires. The new Cadillac plant will permit a production of approximately 250 cars daily. Scripps-Booth, now running fifty-five, will be able to double production in its new quarters.

The new Maxwell-Chalmers plant will double production facilities there. When the Maxwell division is housed in its new factory the present plant will be devoted to Chalmers production exclusively. This will permit the two concerns to run an average of 600 cars daily, which is more than double the present output.

Additions to the Buick and Chevrolet plants at Flint will greatly increase production. Approximately \$4,500,000 is being invested by General Motors at the Olds Motor Works. This company has just set a new production mark of 230 jobs in one day. Of this number 160 were cars. This company will turn out 41,000 cars this year and with its new plant additions in operation hopes to produce 80,000 jobs in 1920.

Dort production was started last year and averaged 17,000, officials declare, while every effort will be made to run 30,000 machines this year. This can be done by making slight alterations at the present factory. This company already has purchased and installed \$250,000 worth of new machinery in its present plant.

Ford will run 2,000,000 cars in 1920 and will make the necessary changes to bring its daily production up to the 3,600,000 mark. Several new units are under construction at the Highland Park establishment. At River Rouge, the shipbuilding plant is being converted into a body plant. Ford is now in a position to build every body, both open and closed, which this company will require.

The new plant Hudson is building for Essex production will permit it to devote its entire present establishment to Hudson production again. This company is running 240 of both machines daily and built 40,000 last year. A schedule of 80,000 machines in 1920 is contemplated. The Bailey Motors Co., Kalamazoo, Mich., will run 5,000 cars in 1920. This will be a production increase of 50 per cent. and can be accomplished without building new manufacturing units. Hupp plans a big production increase. Right at present this company is 8,000 orders ahead of production. Its 1919 schedule was 18,000 cars and this probably will be run up to 30,000 within the next twelve months.

Paige-Detroit will go after export business for the first time in its history in 1920. The company already has a splendid foreign trade which come to it unsolicited. It is announced unofficially that this company is planning a branch factory in Canada to care for its European trade. The company run about 30,000 cars in 1919 and will greatly increase this in 1920.

At Cleveland Chandler proposes to build between 25,000 and 30,000 cars this year. A 400-ft. four-story addition is being added to the present plant, while three more stories will be built on the 400-ft. one-story tractor building. A five-story office building will be built.

Peerless will double production in 1920 and is making plans accordingly. A new plant for Jordan will permit great production expansions there.

EUROPEAN CAR MAKERS ADOPT DURATEX.

Further evidence of the popularity of American quality products with foreign automobile manufacturers is disclosed in the announcement of the Duratex Co., Newark, N. J., that the Austin Motor Co. and the Albert Car Co., of England, and the Citroen Car Co. and the Alsace-Lorraine Railroad Co., both of France, have adopted Duratex Upholstery as standard for their cars. This comparatively new American product is quickly coming into high favor with manufacturers of fine cars for the reason that it retains its finish, is free from the faults of leather (for which it is not a substitute, however), and, in addition, costs materially less.

A SCIENTIFIC TIRE

THERE is a right way to build a machine—a scientifically right way—which requires economy in operating the machine rather than cheap construction of it.

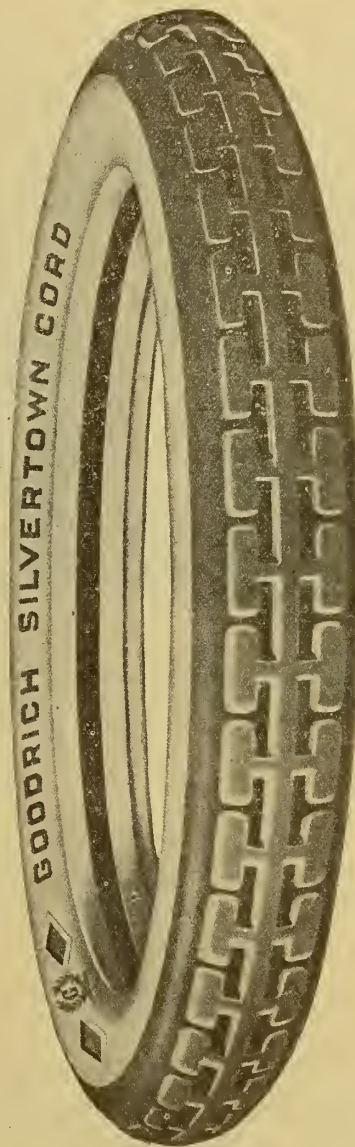
An automobile tire is a machine, and the scientifically right way to build a tire is the specially wrapped cable-cord structure, found only in Silvertown Cord Tires—

Cable-cord is cabled to withstand stress the same as cable of huge suspension bridges.

A look into the cable-cord body of a Silvertown will show an engineer why the rubber insulated cable-cord builds up a tire, which keeps cool and immune to internal heat, the great destroyer of tires.

Though Silvertowns cost a little more than ordinary tires at the outset, their ultimate economy in *increased engine power*, in *gasoline saving*, and *more mileage*, backed by an 7,000 mile adjustment basis, quickly cancels the first cost.

Know Silvertowns by the **Twin Red Diamonds** on the sidewall.



“BEST IN THE LONG RUN”

FURUKAWA & Co., Ltd.

SOLE AGENTS FOR CHINA

1B Jinkee Road, SHANGHAI. Tel. Central 4932.

PEKING, TIENTSIN, HANKOW, HONGKONG, DAIREN.

WITH ENGIVE YOU'D HAVE A MOTORS FACTORY.

Vast Plant of Shanghai Horse Bazaar and Motor Company, Ltd., Could Build Them.



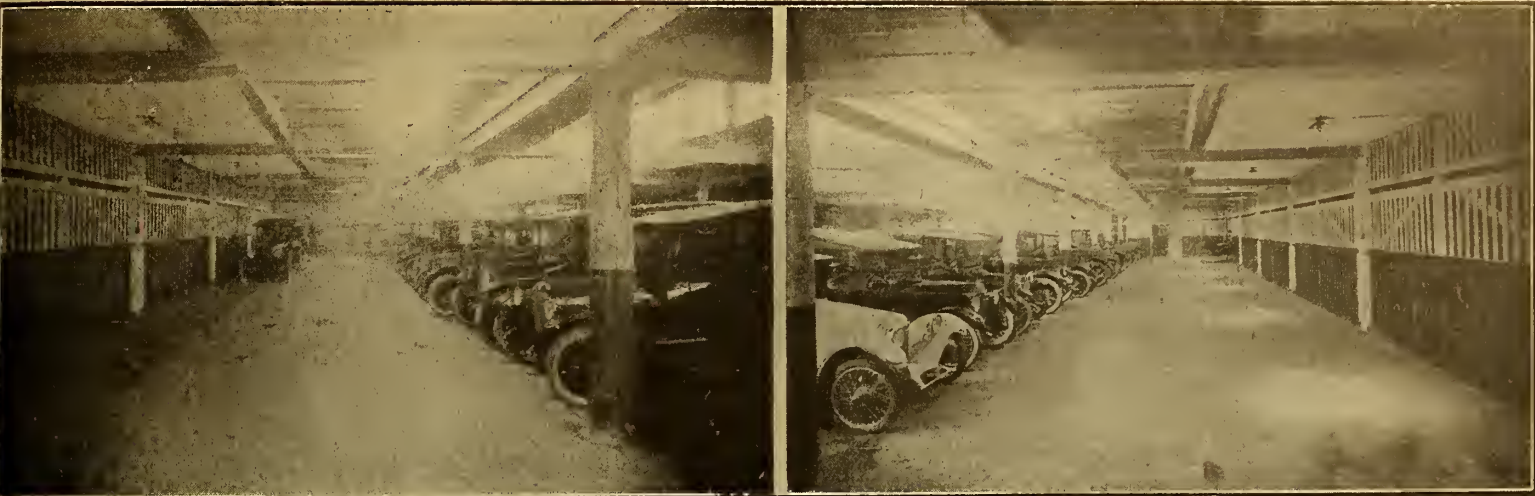
Home of the Shanghai Horse Bazaar and Motors Co., Ltd., showing front of new display room.

WITH THE ADDITION of machine shops with the needed departments for building engines and a few other mechanical automotive parts of a motor car, there might be in Shanghai an automobile factory and on the streets of the city locally built cars bearing the name of the "Shanghai" or the "China." Few motorists or other persons of the city of Shanghai realize the vastness and thoroughness of the organization referred to or know the work that is being done within the departments of its plant—the Shanghai Horse Bazaar and Motor Company, Ltd.

One of the earlier business organizations of the city, the Shanghai Horse Bazaar was established in 1851 and in those early days did not have affixed to its corporate name "motor" since the automobile was then unknown and the horse and pony held the people of Shanghai as a means of transportation, pleasure and sport. With the coming of the motor car and its subsequent development in Shanghai, in 1914 the name "motor" was added to that of "horse bazaar" and the company took as its first motor car agency the representation of the Berliet, a car which is still dis-

tributed through the corporation. The present Shanghai representations of the company include the Studebaker Corp., of South Bend, Ind.; the F. B. Stearns Co., Cleveland, Ohio; Berliet, Lyons; Scripps-Booth Corp., Detroit; Arrol-Johnson, Ltd., Dumfries; Vauxhall Motors Ltd., Luton, and John I. Thornycroft and Co., Ltd., London. Increased demand and high excellence of service brought the necessity for expansion to the company and gradually as the motor car has displaced the horse so that department took over the most of the space of the home of the organization, although over 150 horses and ponies now have a home there. In the fall of 1916 it became necessary to remodel and increase the capacity of the plant and just recently a showroom such as has found adoption as a standard in the majority of motor car companies in the larger cities of the United States has been completed.

The organization of the motors department of the Shanghai Horse Bazaar and Motor Company, Ltd., is being constantly brought to a higher plane of efficiency although at the present time it compares favorably not only with the larger garages and distributing establishments of the United



Each Side of the Large Storage Room, Showing Private Stalls.

States and Europe but also with many of the smaller manufacturing establishments of automobiles where assembled cars are produced and sold bearing the name of the assembler.

The extensiveness and thoroughness of the work of the motor department cannot be thoroughly realized or appreciated without a tour of inspection through all of the many departments.

Upon entering the home of the Shanghai Horse Bazaar and Motor Company, Ltd., from the Bubbling Well Road side, one comes into the storage department, opening off from which are other departments. The large and commodious central storage space which is exceptionally well lighted and ventilated has a floor capacity of 100 cars in general storage and fifty cars in private stalls. Cars on the open storage space receive the same attention that is paid to cars in the private stalls, being carefully watched to prevent any tampering or meddling, the private stalls affording in addition a fixed storage space and room for such minor adjustments and cleaning as may be made by the chauffeur.

To the left of the storage department in the rear is the tire supply room where all sizes and requirements in Savage and United States tires are kept in stock for the

convenience of the motorists. The stock is supervised by a trained stockkeeper who sees to its arrangement and upkeep, filling in the needed tires and tubes when the supply is exhausted and inspecting carefully each one before it is placed in the rack and before it passes into the hands of the mechanic or chauffeur who places it in use. To the left of the tire storage department is the vulcanizing room, a department which has outgrown its present quarters and will soon be moved into larger ones in the Burkill Road building of the company. In this department modern scientific supervision is developed to the highest degree of efficiency assuring the motorist of real service in tire repairing and satisfaction with the results obtained.

To the right of the front of the storage space and in rear of the offices and the showroom is the accessories department, where every modern appliance which is needed for installation on an automobile is carried. As noted in the last issue of "The Oriental Motor" there are 7,000 accessories which may be installed in, on or about a motor car, so some idea of the diversity of the stock of motor accessories may be obtained from this. Prominent among these accessories, which are also in charge of a storekeeper with full knowledge of the requirements of such work, are



The Accessories Storeroom.



The Repairs and Mechanical Department.



Expansion Space—Looking toward the Coachwork and Blacksmith shops.

the Stewart-Warner Lines and the Prestolite Storage Batteries.

At the rear and right of the storage room is the battery department in which fifty batteries may be recharged at one time. Here careful supervision is again emphasized, each battery receiving the proper charge needed and being watched through the entire process by men trained for this work.

Opening off the battery storage department is the lathe room where needed adjustments and repairs are made and

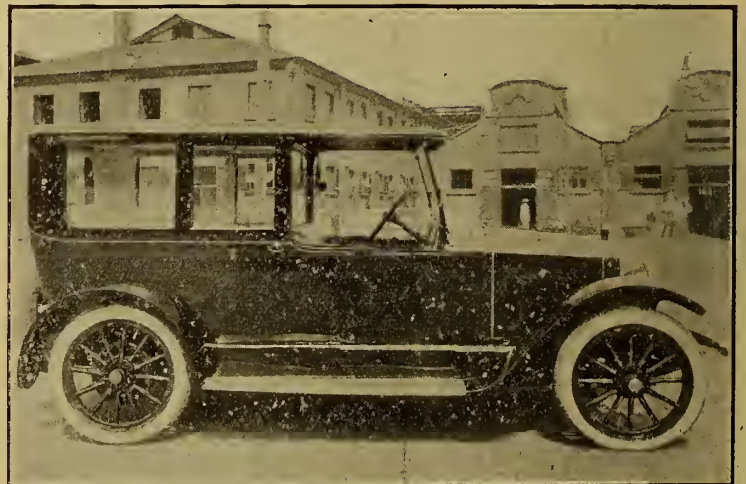
no repair and no replacement of any part of a motor car is impossible. Spare parts are carried in stock and such as are not made in the shops of the Company, duplicating with an exact fineness the broken part as if the replacing part had come from the factory which produced the car.

In the first story over the storage department is the paint and varnish departments of the plant, where sixty cars may be worked upon at one time and the departments are usually filled to capacity. Here the old paint is removed from the body and new coats applied with such deftness and skill that oftentimes the car repainted excels in its finish the first finish from the factory. In the varnish room, modern factory methods of ventilation and heating are applied, bringing out the finishing touches of the process. In these departments are also finished the bodies which are built in the coachwork departments of the plant. With these departments are the paint and varnish storerooms and the cloth room for tops and upholstery, all of which are especially im-



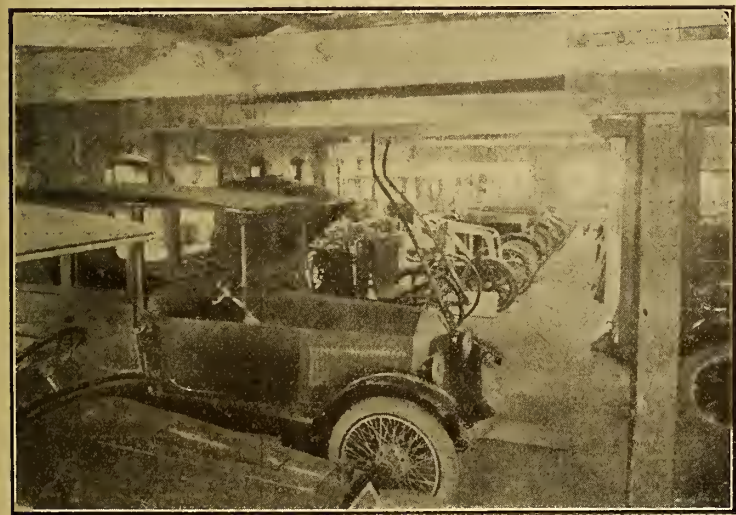
Painting and Finishing Department.

in the rear of this is the machine and repair shops. In this section of the company's establishment thirty fitters are at work on every type of motor repairs and adjustments. All the needed modern aids in the way of machinery and tools are at their disposal and foreign supervision by an expert automobile mechanic assures the motorist of the best possible service. Such is the stock and service of the Shanghai Horse Bazaar and Motor Company, Ltd., that no adjustment,



A Finished Body Ready for the Road.

ported for this work. Passing out of the Bubbling Well Road building, across Burkill Road the possibilities of expansion which the future will necessitate for the motors department can be realized. About a large open courtyard, private storage stalls are placed. In one building, room is being made for the installation of more space. In another room is being made for the vulcanizing department which has outgrown its present quarters in the Bubbling Well Road building. In the Burkill Road plant are located the coachwork departments and the blacksmith shops.



Where the Bodies are Built.

Entering the coachwork department one may trace the imported ash used in body construction through from the log to the finished limousine or truck body. On the floor are all types of bodies undergoing the process of production, the specifications coming from the designer who is one of the staff of the Company. Expert workers fashion the wood into bodies having the lines of the most modern automobile construction and in many cases adding improved touches here and there which give the bodies constructed here more actual style than that of either the American or Continental models.

These bodies built in the plant of the Shanghai Horse



A Look Down from the Rear on the Bubbling Well Road plant.

Bazaar and Motor Company, Ltd., weather the climate of Shanghai better than the bodies of imported cars, due to the fact that the materials are seasoned to this climate.

In connection with the coachwork department is the upholstery and top division, where imported materials of the highest quality are used to give the bodies constructed that last added touch of artistry. Here also are the storage rooms where the glass used and the wood in logs are kept at hand. Passing from the coachwork department, one enters the blacksmith department where all of the heavy machine and casting work which needs the services of such a shop are done.

The numerical strength of the staff of the motor department of the Shanghai Horse Bazaar and Motor Company, Ltd., is indicated by the vastness of the organization and the thoroughness with which all of the work is done. At its maximum of productiveness, which necessity brings in the spring and summer months, the staff of the organization numbers 300 and during the slacker seasons a minimum of 200 men are employed.

All of which warrants the statement that given an engine, the Shanghai Horse Bazaar and Motor Company, Ltd., could produce a modern motor car giving road satisfaction and performance which would be on a parity with cars of American or Continental make.



A part of the Staff, Foreign and Chinese, of the Shanghai Horse Bazaar and Motor Co., Ltd.

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan	Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan
ROAMER											STEPHENS										
C-6-54	6-3½x5¼	Bosch	Bijur	128	32x4	SS	2650	†2575	2750	3450	Salient Six 6-3½x4½	A-Lite	A-Lite	122	32x4	SS	1975	1975	*2050	.....
SAXON											STUDEBAKER										
Y-18	6-2½x4½	Remy	Wagner	112	32x3¼	SS	†1295	1295	.....	.....	EH-6-50 6-3½x5	Remy	Wagner	119	32x4	SS	1685	1685	†1685	2585	
SAYERS											E-G-6 6-3½x5										
SIX-42	6-3½x4½	Delco	Delco	118	32x4	...	.....	1745	.....	2695	STUTZ	G	Delco	Remy	{ 120	32x4½	SS	2750	†2850	*2850	.....
SCRIPPS-BOOTH											G										
Six-39	6-2½x4½	Remy	Remy	112	32x4	SS	†1295	1295	.....	1985	TEMPLAR										
Six-39	Export Model	Remy	Remy	112	32x4	SS	1495	1495	.....	2185	A-445	4-3½x5½	Simms	Bijur	118	32x4	SS	2485	2485	†2485	3385
SENECA											VELIE										
	4-3½x4½	Remy	Remy	108	30x3½	C	.....	990	.....	.....	48	6-3½x4½	A.Kent	Bijur	115	32x4	SS	1685	1685	.....	2385
SINGER											WESTCOTT										
19	6-4 x5½	Bosch	Wsths	139	35x5	SS	5250	†5250	5250	7200	A-48	6-3½x5½	Delco	Delco	125	32x4½	SS	.....	2590	2590	4190
STANDARD											B-38 6-3½x4½										
H	8-3½x5	Dixie	Wsths	127	34x4½	SS	3000	†3000	3000	4100	WILLYS-KNIGHT										
STANLEY											88-4 4-4½x4½										
Steamer 2-4 x5	.....	.....	.....	130	35x4½	SS	.....	.....	3450	4950	WINTON										
STEARNS											24										
SKL4	4-3½x5½	Wsths	Wsths	125	34x4½	SS	†2250	2250	2475	3300	25										
											*6-passenger. †4-passenger. ‡3-passenger.										

ABBREVIATIONS.—“A.Kent” Atwater Kent, “A-Lite” Auto-Lite, “Conn” Connecticut, “G & D” Gray & Davis, “Eisman” Eismann, “L-N” Leece-Neville, “N.E.” North East, “Wsths” Westinghouse, “W. Lrnd.” Ward Leonard, “SS” Straight Side, “QD” Quick Detachable, “C” Clincher “QDR” Quick Detachable Reversible. NOTE—30x3½r means that the rear tires are 30x3½ and the front are smaller. ‡31x4 C tires on Sedan.

LATEST BRITISH CAR PRICES.

The following is a revised price list of British motor cars available at the time of the December number. It is not complete and includes only a partial list of exhibitors at the recent Olympia show.

A. C.	6-cyl. Chassis only...	£550
ANGUS-SANDERSON.	4-cyl. 14.3 h.p. Chassis only...	£575
ARMSTRONG-SIDDELEY,	“SIX.” Chassis only ...	£720
	Saloon Double Phaeton ...	1,000
ARROL-JOHNSTON.	4-cyl. “Victory Model,”	
	Complete ...	£700
	4-cyl. 15.9 h.p. Complete ...	625
AUSTIN.	4-cyl. 20 h.p. Chassis Complete ...	£470
	4-cyl. 20 h.p. Standard Model ...	595
	4-cyl. 20 h.p. Four-seater Coupé ...	695
	4-cyl. 20 h.p. Seven-seater Landaulet ...	725
AUTOCRAT.	Two-seater ...	£445
	Four-seater ...	475
	Coupé ...	500
BEAN.	4-cyl. Two-seater, Open ...	£425
	Four-seater, „ ...	450
	Two-seater, Coupé ...	500
	Four-seater, „ ...	550
BELSIZE.	4-cyl. 20.1 h.p. Chassis only ...	£450
	Two-seater Model ...	550
	Four- „ „ ...	620
	Coupé ...	770
	Landaulet ...	830
BRITON LIGHT CAR.	4-cyl. 9.9 h.p. Two-seater	
	Model ...	£395
BRITON STANDARD MODEL.	4-cyl. 11.3 h.p.	
	Two-seater ...	£450
	Four-seater ...	475
CALCOTT.	11.9 h.p. Two-seater ...	£475
	11.9 h.p. Coupé ...	550
CALTHORPE.	4-cyl. 10.5 h.p. Two-seater	
	Standard ...	375 guineas
	Four-seater Standard ...	400 guineas
	Coupé ...	450 guineas
	Four-seater Sporting ...	400 guineas
CHARRON.	Chassis only ...	£960
CHARRON-LAYCOCK.	Two-seater ...	460 guineas

	Three-seater ...	490 guineas
	Coupé ...	540 guineas
CROSSLEY.	4-cyl. 25-30 h.p. R F.C. Chassis...	£950
	Touring ...	1,200
	Limousine Landaulet ...	1,400
	Coupé ...	1,400
DAIMLER.	“Light 30” Chassis ...	£1,000
	“Standard 30” Chassis ...	1,060
	“Special 45” ...	1,300
TALBOT-DARRACQ.	16 h.p. 4-cyl. Four-seater model	£750
TALBOT-DARRACQ.	8-cyl. 20 h.p. Chassis ...	£950
DAWSON.	4-cyl. 11 h.p. Two-seater ...	£475
	Coupé ...	600
DELAHAYE.	4-cyl. 14-18 h.p. Chassis only ...	£1,050
	6-cyl. 18-22 h.p. „ ...	£1,500
DEEMSTER.	4-cyl. 10 h.p. Two-seater ...	385 guineas
	Coupé ...	400 „
	Four-seater ...	440 „
DOUGLAS.	2-cyl. 10.5 h.p. Chassis only ...	£350
	Standard Body complete ...	400
ENFIELD-ALLDAY.	5-cyl. 10 p.h. Two-seater ...	£350
	„ „ Four-seater ...	350
ENSIGN.	6-cyl. 38.4 h.p. Chassis only...	£1,700
GLADIATOR.	4-cyl. 12-14 h.p. Four-seater Model ...	£785
	Coupé ...	900
	4-cyl. 25-35 h.p. Coupé Saloon ...	1,200
G. W. K.	4-cyl. Two-seater ...	£275
	Four-seater ...	275
D. F. P.	12.1 h.p. Chassis only ...	£675
HAMMOND.	4-cyl. 11-22. Two-seater ...	£585
HAMPTON.	4-cyl. 9.4 h.p. Chassis only ...	£360
	Two-seater Model... ..	425
	Four-seater „ ...	465
	Coupé Model ...	500
H. E. CAR.	4-cyl. 13.9 h.p. Chassis only ...	£550
	Complete, Four-seater ...	£700
HILLMAN.	4-cyl. Two-seater Model ...	£435
	Four-seater Model ...	495
	Coupé ...	505
HORSTMANN.	Two-seater Complete ...	£350
	Four-seater „ ...	385
	Coupé „ ...	410

HUMBER.	4-cyl. 10 h.p. Two-seater Complete	...	£480	STAR.	20.1 h.p. Four-seater, saloon top	...	£885
	4-cyl. 10 h.p. Four-seater	...	530		15.9 h.p. Two-seater	...	670
	4-cyl. 10 h.p. Coupé	...	£575		Five-seater	...	690
	4-cyl. 15.9 h.p. Five-seater	...	750	STOREY.	14.3 h.p. Chassis only	...	£525
	4-cyl. 15.9 h.p. Saloon	...	£1,010		" Two/Four-seater	...	600
LANCHESTER.	40 h.p. Chassis	...	£1,500		" Coupé	...	700
MARLBOROUGH.	Two-seater	...	£550	SUNBEAM.	16 h.p. 4-cyl. Chassis	...	£850
MASCOTTE.	Three-seater Model	...	£450		Touring Car	...	1,125
	Two-seater, Polished aluminium body	...	575		Limousine	...	1,275
	Coupé	...	675		24 h.p. 6-cyl. Chassis	...	1,125
METEORITE.	Chassis Complete	...	£375		Touring	...	1,400
	Two-seater model	...	450		Limousine	...	1,650
	Four-seater	...	575	TALBOT.	4-cyl. 25 h.p. Chassis only	...	£950
MORRIS-COWLEY.	Two-seater	...	£315		4-cyl. 25 h.p. Five-seater	...	1,230
MORRIS-OXFORD.	4-cyl. Two-seater Complete	...	£380		6-cyl. 30 h.p. Chassis only	...	1,050
	Four-seater	...	415	THOR.	4-cyl. 15.5 h.p. Two-seater	...	£400
	Coupé	...	475		" " Coupé	...	450
NAPIER.	6-cyl. 40-50 h.p. Chassis only	...	£1,750	UNIC.	4-cyl. 13-24 h.p. Chassis only	...	£970
	Landulet	...	2,450	VARLEY-WOODS.	Two-seater Model	...	£540
	Sporting Torpedo	...	2,240		Four-seater Model	...	660
	Cabriolet	...	2,340		Coupé	...	760
PALLADIUM.	2-cyl. 10 h.p. Two-seater Model.	275 guineas		VAUXHALL.	25 h.p. Chassis only	...	£950
	Four-seater Model	295 "			30 h.p. Chassis only	...	1,125
	Coupé	365 "		VULCAN.	16 h.p. Four-seater Model	...	£675
PHOENIX.	4-cyl. 11.9 h.p. Two-seater Complete	...	£425		12 h.p. Light Car, Two-seater	...	500
ROLLS-ROYCE.	6-cyl. Chassis only	...	£1,850		Four-seater	...	525
ROVER.	12 h.p. Two-seater model	...	£700	WAVERLY.	4-cyl. Chassis only	...	£450
	Four-seater	...	750		14 h.p. Five-seater Model	...	575
	Limousine Coupé	...	800		Saloon	...	750
ROVER LIGHT CAR.	8 h.p. Two-seater	...	£230	WOLSELEY TEN.	4-cyl. Two-seater	...	£500
RUSTON-HORNSBY.	Five-seater	...	£600		Three-seater	...	585
S. C. A. T.	4-cyl. 15 h.p. Chassis	...	600		Coupé	...	600
SINGER.	Two-seater Model	...	£400	WOLSELEY FIFTEEN.	4-cyl. Touring	...	£800
	Two-seater Sporting	...	400		Saloon	...	1,000
	Coupé	...	500	WOLSELEY TWENTY.	6-cyl. Touring de luxe	...	£1,150
STANDARD.	9.5 h.p. Chassis only	...	£385		Landulet	...	1,400
	Two-seater	...	425		Coupé	...	1,450
	Coupé	...	525	ZEPHYR.	4-cyl. 11.9 h.p. Chassis Complete	...	£350

FAST GROWTH OF MOTOR COMPANY BRINGS FINE.

Expansion of Central Garage Company Causes Interference With Traffic—And It Cost \$1.

There are many businesses which would willingly pay a fine of one dollar if their expansion was coming so fast that they could not provide adequate housing facilities and it interfered with traffic. In fact, the nominal fine instead of being a reproof would seem more to be a barometer of stable growth and a source of satisfaction not only to the owners involved but also to the city in which it occurred.

This unique case happened recently in Shanghai when the Central Garage Company was fined the sum of \$1 in the British Police Court for causing an obstruction of traffic in Weihaiwei Road with certain motor cars.

When the evidence was taken the Central Garage Company acknowledged the presence of the motors upon the road at the time of the complaint lodged by the police and gave an adequate explanation in the fact that the business of the company was growing so fast that they were unable to find housing facilities large enough to accommodate it. The evidence of the defendant brought out the rapid growth of the motor car business by testifying that the original building on Jinkee Road had been filled to overflowing and complaints were made against it. To remedy this, a building in the French Concession was obtained but within a

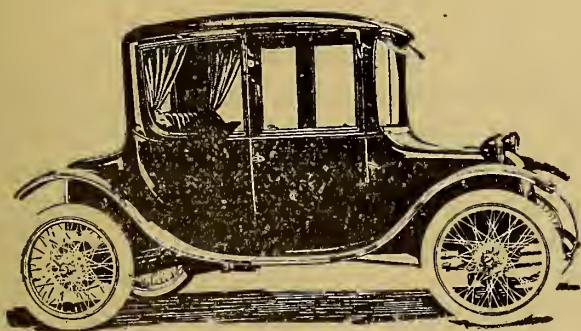
short time a second congestion resulted. A third building was then obtained in Weihaiwei Road and the business grew out of the three establishments on to the road and caused the police complaint. The Central Garage Company's new modern garage plant at the corner of Hongkong and Szechuen Roads is nearing completion, it was said. The Company stated that all within their power was being done to make the congestion as small as possible.

Then came the fine of \$1 with a warning of imposing a maximum penalty. It should be taken by Shanghai, especially those interested in the motor industry of the city, as an indication of what motors are meaning to the daily life of the city, the increase in the motoring population and of what to expect of the future.

BRITISH TO SPEND MILLIONS FOR ROADS.

The highway authorities of Great Britain, according to a recent report have made grants, to July 31, 1919, amounting to \$45,500,000 for the repair of roads and bridges in the British Isles. This grant was divided as follows: England, \$39,240,000; Scotland, \$2,640,000; Ireland, \$645,000; Wales, \$2,975,000.

Milburn
LIGHT ELECTRIC



A Motor-Car Ride Is Not Necessarily An Endurance Test

Particularly is this so where level roads and short distances are so easy on automobiles.

What is the use, then, of paying for a high-powered, complicated car that is strong enough to climb a mountain?

An automobile can go only so fast and so far as streets and traffic conditions will permit. In China, a light electric will serve every purpose and keep down the expense of light, oil, and tires.

Andersen, Meyer & Co., Ltd.

SHANGHAI

7 Yuen Ming Yuen Road

Telephone Central 778

Also at Peking, Tientsin, Hankow and Hongkong.



M 9



MOTORS DEFEAT BOLSHEVISM.

Since their inception automobiles have been put to many and varied uses and the pages of the motor car journals monthly carry new feats of strength, endurance and performance, but the latest function ascribed to motor driven vehicles is that of being an antidote for Bolshevism.

This view is offered by a motor car distributor in one of the larger cities of the United States who declares that Bolshevism may be "gassed" from the exhaust of the country's automobiles.

"Motorists," the prophet says, "get too much joy out of living to harbor desires of 'busting' up the government. The relaxation which is afforded the mind and body by motor trips keep both healthy and make people keen for the accomplishment of something more profitable than 'gumming up the cards.'"

"You can't imagine a man sitting at the wheel of his own car and plotting a raid on his white collared neighbor's life or property. Within a year there will be 10,000,000 motor car owners in the United States and adding a family of four each means that practically fifty per cent. of the population of the country will be owners of private property—real private property—motor cars.

"It is going to be mighty hard for an agitator to make much progress when every other man he meets is a car owner."

And now that everything else has been tried on the Bolsheviks, probably automobiles would be equal to the occasion as a combatant force as well as an antidote.

CHANGE OF MIND COSTS FORD \$600,000.

Judgment for \$600,000 damages was awarded the Woodward Hotel Co., New York City, November 17, by a jury in the Federal district court at that point in the hotel's suit against the Ford Motor Co. As related in these columns some time ago, the Woodward alleged that it had closed a contract with the Ford company to operate as a hotel the proposed 13 upper floors of the 15 that were to comprise the whole of the New York Ford building, which at that time was in process of planning. Later, the Ford company decided to restrict the number of floors of the building to the number which it needed for office purposes, and denied that it was obligated to put up extra construction for the hotel's use.

MOTOR CAR INSURANCE

THE COMPREHENSIVE POLICY

OF THE

ALLIANCE ASSURANCE

COMPANY, LIMITED

(ASSETS OVER £24,000,000)

Affords FULL COVER to Motorists,

INCLUDING—

LIABILITY TO THIRD PARTIES.—

DAMAGE TO, OR LOSS OF, CAR

(including lamp and accessories) by—

Collision or other Accident,

Fire, Lightning, Explosion or Self-Ignition,

Robbery or Theft or any attempt Thereat,

Malicious and Wilful Acts by any Persons.

MEDICAL & SURGICAL EXPENSES.

ADDITIONAL BENEFITS

Can be included in the Policy by Arrangement.

ABSOLUTE SECURITY

**PROMPT AND LIBERAL SETTLEMENT
OF ALL CLAIMS.**

AGENTS—

JARDINE, MATHESON & Co., Ltd.,
SHANGHAI,

AND AT

TIENTSIN, PEKING, HANKOW, TSINGTAO.

ANTI-FREEZING SOLUTIONS.

Automobilists, especially the motorist making his initial investment, will find upon consulting the instruction book, accompanying the car, a paragraph cautioning him to guard against freezing of the water of the cooling system.

Generally, instructions are given for the preparation and use of solutions for lowering the freezing point of the water in the radiating system. But as the car is usually purchased in warm weather, the instruction book is often mislaid or the suggestions for care of the cooling system forgotten.

It is reasonable to suppose that the temperature will drop below the freezing point this month, therefore the motorist who wishes to avoid the expense of replacing any or all of the engine parts, will do either one of two things. Either he will draw off the water from the cooling system, when the car is not in use, or he will use an anti-freezing solution.

Opinion varies as to the best solution to employ. Some car makers recommend alcohol, while others suggest the solution of water and calcium chloride. Still others approve of glycerine and water.

In selecting an anti-freezing solution, the motorist must be governed by conditions of locality and the general action of the radiating system and the cooling capacity of the car. Where extreme changes occur and the weather is mild one day and freezing the next, it is advisable to employ a solution that will not boil in mild weather, otherwise the solution will be evaporated rapidly.

Another factor to be considered is the cooling system which overheats very rapidly, or in some cases remains cool even under high atmospheric temperatures. In cases where the system tends to heat, or in localities of temperature extremes, the alcohol solution is not practical.

The glycerine solution has a high vaporizing point but it may attack the hose fittings. It has a tendency to creep, that is, it tends to work up and over the top of the radiator.

The calcium chloride mixture has a vaporizing point slightly lower than that of the glycerine solution, but is mixed very readily. One should be careful to obtain the chemically pure material, not the commercial.

With any of the anti-freezing solutions given in the table there comes the danger of evaporation. The motorist must make regular tests of the solution or the water will freeze.

We have given the table for those motorists who like to mix their own solutions, but our best advice is to try the compounds sold by garages for the same purpose.

Calcium Chloride.

Pounds of Cal. Chl.	Gallons of Water	Freezing Point
2	1	18 F
3	1	1.5 F
4	1	-17 F
5	1	-39 F

Wood Alcohol.		
Per cent of Alcohol	Per cent of Water	Freezing Point
5	95	25 F
15	85	11 F
20	80	5 F
30	70	-5 F
35	65	-16 F

In using alcohol motorists should remember that denatured alcohol has a higher freezing point than wood alcohol.

Glycerine.		
Per cent of Glycerine	Per cent of Water	Freezing Point
10	90	28 F
30	70	15 F
40	60	5 F
48	52	0 F
54	46	-5 F
58	42	-10 F

The difficulties in the way of using glycerine and water alone have led to the use of a mixture containing alcohol in addition. The alcohol and glycerine are generally added in equal parts to the water, the amount depending upon the freezing point desired. The percentage of mixture to add may be obtained from the accompanying table :

Mixture		
Freezing Point	Glycerine and Alcohol	Water
20 degrees Fahrenheit	15 per cent.	85 per cent.
15 degrees Fahrenheit	20 per cent.	80 per cent.
10 degrees Fahrenheit	24 per cent.	76 per cent.
5 degrees Fahrenheit	27 per cent.	73 per cent.
0 degrees Fahrenheit	29 per cent.	68 per cent.
— 5 degrees Fahrenheit	30 per cent.	70 per cent.
—15 degrees Fahrenheit	32 per cent.	68 per cent.

THIS FORD FROM CANADA.

The concern of P. Lyall and Sons Construction Co., Ltd., Montreal, announces that it is about to put a car on the Canadian market at a price below any machine on the North American Continent or in Great Britain. When the war ceased the company switched its munition plant on to experimental work on cars. The result is they intend to produce a car to sell at £120. The chief economy is in the engine designed by one of the company's staff. It is characterized by the small number of component parts. It is officially stated that the engine has been subjected to very severe tests, and that it will drive the car, as designed, 60 miles on one gallon of petrol. Details of this remarkable engine are promised in a short time. The publication of this information led to wild fluctuations in the shares of the company, the directors issuing a statement warning the public that there was no justification for these speculative movements.

MOTOR TRUCK SERVICE

'Phone North 2379



We can prove to you that you will not only save time but money as well by using our Truck Service.

NOTHING TOO BIG OR TOO SMALL

Special Facilities for Handling
HEAVY CARGO

A Big Factor is Safety in Transit which we Guarantee.

Let us Estimate on your Cartage
DAY AND NIGHT SERVICE

Commercial Transportation Co.
698 Tiendong Road, Shanghai.

NORTH BRITISH
AND
MERCANTILE INSURANCE CO.

MOTOR CAR INSURANCE

MODERATE RATES

AND

COMPREHENSIVE CONDITIONS

INCLUDING

UNLIMITED THIRD PARTY LIABILITY.

AGENTS:—

ALEX. ROSS & Co. 12 Hankow Road

E. D. SASSOON & Co. 9 Jinkee Road

SHANGHAI.

GET YOUR
SUN GLASSES
OR
MOTOR GOGGLES
GROUND TO PRESCRIPTION

We also carry large stocks of
Plain Glasses in Smokes & Amber

WE SPECIALIZE IN
HIGH GRADE PRESCRIPTION WORK
KRYPTOKS
CROOKES
TORICS

THE
NATIONAL OPTICAL CO.

Refracting and Manufacturing Opticians

69 Nanking Road (near Honan Road)

SHANGHAI.

PROS AND CONS OF LEFT-HAND STEERING.

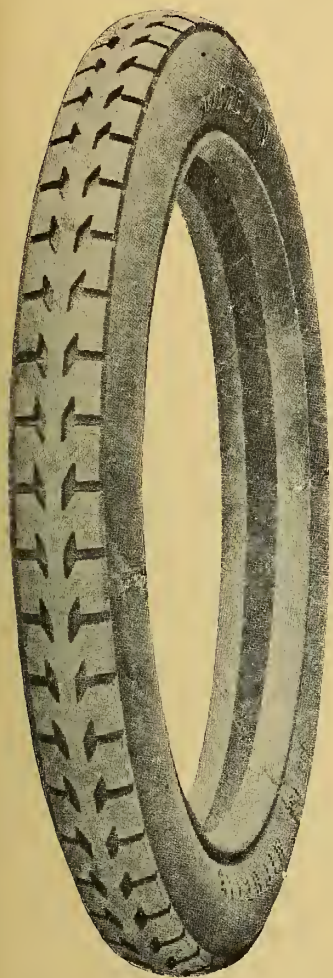
Great Increase in Number of Cars with this Mode of Driving.

(BY AN ENGLISH MOTOIST.)

It is probable that during the coming season there will be a great increase in the number of cars fitted with left-hand steering sold in this country. Not only have Fords adopted this practice for their standard 1920 models, but in addition there will be a number of American and Continental cars imported which will not have their steering gears altered for sale in this country.

At first sight it would appear that the actual driving of a car from the left side with our present rule of the road would be a great drawback to this feature, but, as a matter of fact, it is with the incidental disadvantages that the owner-driver of a "left-handed" car will be brought most into contact. It is not intended here to attempt to denounce the left-hand setting of the wheel, for it has some obvious advantages, while the disadvantages are not so important as might be at first thought. Now that cars are being fitted on the central gear and brake controls in ever increasing numbers the left driving position brings these levers to the driver's right-hand side, and although it may be easy to change the gear with either hand, every driver who has driven an ordinary English car for any length of time prefers to change gear with his right hand. With a four-door body it will greatly appeal to the owner-driver who uses his car for business purposes, for the reason that he can get directly into the driving seat when the car is drawn up at the curb without disturbing his companion or upsetting parcels, etc., on the passenger's seat.

Regarding the actual driving of the car, the supposition that left-hand steering is dangerous or unsuitable for countries where the left-hand rules of the road prevail, is amply refuted by the fact that practically none of the Army drivers who went to France with English cars and had to drive on roads where the opposite ruling to that in this country was in force experienced any difficulty so long as they were not transferred from home to overseas units too frequently. Arguing on similar lines, the majority of cars in France have right-hand steering, and judging by the speed at which motor traffic careers through Paris and other Continental towns, their chauffeurs do not seem troubled in this respect. Having done a fair amount of driving on foreign roads in English cars and in England on left-hand steering cars, the writer can vouch for the fact that no awkwardness is experienced after the first cautious half hour, and that the only permanent disadvantage on the road is that more care must be exercised. It might be thought that when passing other traffic on the open road



THE MICHELIN TYRE

(MANUFACTURED
IN FRANCE)



Note thickness of walls
and tread

There are many types and makes of Tyres on the market **BUT** only two types and one quality of **MICHELIN**; **SQUARE TREAD** and **NON-SKID**. Its reputation is known the world over.

Once Tried—Always Used.

THE AUTO PALACE Co.,
SOLE AGENTS
Practical Motor Engineers
362 Avenue Joffre, SHANGHAI.

Ask For

Price List



**'PHONE
WEST
465**

a certain amount of danger would be incurred owing to the fact that the greater portion of the car must be swung over the road before the driver can see past the vehicle he has overtaken. Since, however, it is not usual to follow immediately behind a cart or truck and then suddenly swerve to the right, coupled with the fact that the difference in lateral position of the driver's eye in cars fitted with left or right-hand steering is only 25 ins. to 30 ins., make this disadvantage negligible. In close town traffic left-hand steering has the advantage that a greater degree of accuracy can be obtained owing to the fact that it is possible to see the exact clearance between a car which is being overtaken slowly than with the right-hand type, and on car tracked roads it is a distinct advantage, as a slightly better view is possible when passing a street car on the left-hand side of the road.

It will be seen, therefore, there is no reason why motorists should consider that the left-hand steering on a car is unsuitable as regards actual driving, but in a two-seater car there is the obvious disadvantage that when

central control is fitted the passenger has to walk out into the middle of the road in order to get into the car when it is standing at the roadside. This, however, is not of very great importance, and it is a disadvantage which prevails in the case of a car fitted with the ordinary type of steering gear, but with a four-door body; the only difference being that it is then the driver who has to walk round to get into his seat.

In the writer's opinion the car which has central control fitted is easier to drive if the steering is of the left-handed pattern than if it is of the more usual type, and between the choice of left-handed steering or left-handed gear and brake control, the former is greatly preferable.

"I wonder what the Rolls-Royce is selling for?" You need not be in doubt as to the prices and specifications of the principal British and American cars if you will turn each month to the Motor Car Prices and Specifications Department of "The Oriental Motor."



IT IS more profitable to insure your car BEFORE a smash than afterwards. You have bought the most suitable car for your purpose—now take out the most suitable policy to protect that car.

The "YANGTSE" Policy offers the fullest possible protection and is the most generous to the car owner.

RING UP THE
YANGTSE
INSURANCE ASSOCIATION, LTD.
 (Shanghai Central 5475)
 and ask for a prospectus.

HIRE CARS

MORIMURA GARAGE Co.

N. 2938—Telephones—N. 2939
 I. 13 North Soochow Road, Shanghai

MOTOR CAR & MOTOR CYCLE
Repairing & Overhauling

All kinds of Rubber Goods
GOODRICH TIRES

Show Room: 137 Chapoo Road.

YOU'LL NEED

THE ORIENTAL MOTOR

EVERY MONTH

Why Not Subscribe To-day?

WET-WEATHER MOTORING.

Some Hints on the Prevention of Skids, and Upkeep of Exposed Parts.

One lesson the war has taught us even in Shanghai is that the average modern automobile is an eminently suitable vehicle for bad going and rough roads, and, although before the war there were in many countries motorists who were in the habit of storing their cars during the winter months, the increased confidence which the modern car inspires and the greater comfort which is provided by the closed car has caused as many cars to be seen in the winter as in the summer.

Looked at from the point of convenience, the car is every day coming more and more into its proper sphere as a utility vehicle rather than one which is only used for joy-riding, and, once the habit of motoring has been started, it is difficult for people to reconcile themselves to anything else.

A few hints, therefore, on how to prepare the car for wet-weather driving will not be out of place. It is usual to find that, after having driven over wet roads for any period, various parts of the chassis begin to show specks of rust, due to the enamel being chipped off by road material spurned up by the wheels or by the scratching of the enamel when mud is washed off. This difficulty is not easy to overcome, but the more vulnerable parts of the car should be painted with a hard, black varnish and then given a coating either of grease or petroleum jelly. Detachable wheels or rims, if they are fitted, are sometimes made very hard to operate by the formation of rust on their working surfaces, and it is not unwise to take off the wheels or rims and to paint them with fairly thick grease or else with petroleum jelly. This prevents the ingress of water and the formation of rust and, particularly in the case of rims, makes the operation of changing the tire or wheel much easier when a puncture happens.

One of the old bugbears of wet-weather driving was the ease with which a car would skid, and a great many drivers preferred to stay in rather than experience the nervous tension entailed by the expected sideways motion of the car on wet roads. The modern chassis, with their low centres of gravity, correct weight distribution and improved steering systems, are far less prone to skid than were cars in the years 1911-12. The selection of tires naturally has a great effect on a car's propensity for holding the road or otherwise. This may be best accomplished by the use of non-skid tires or by the use of chains. The main factor in skidding, is the way in which the car is driven, and it is for us to consider the cause and effect of bad driving.

The portion of the road wheel of a car in contact with the road is theoretically stationary, that is, there is no movement between the tire and the road. It is a mechanical fact that, once two bodies in contact have started sliding over each other, less force is required to keep them sliding than the initial pressure necessary to cause any relative movement.

HAUL BY MOTOR LORRY



OUR SERVICE IS EFFICIENT, PROMPT AND RELIABLE

For Quotations:—

THE CHINA GARAGE COMPANY

SHANGHAI

Tel. Central 2403.

21 Foochow Road.

It will be seen, therefore, that, so long as the part of the road wheel in contact with the road is not caused to slide over it in any way, such as by letting in the clutch or by braking too quickly, more sideways pressure will be required to make the car skid than would be the case if the surfaces were sliding over each other. Applying this, it will be seen that sudden braking, tending momentarily to lock the wheels, is very apt to produce skids, and, at the same time, a sudden change of direction due to the steering wheel being pulled over rather than slowly felt round, is very liable to produce front-wheel skid, owing to the tendency of the car to continue in a straight line. The nervous driver who is expecting skids is far more liable to have trouble on a slippery road, due to tension of his muscles being increased and his movements made jerky thereby, than is the more confident motorist, who does not very much care whether he skids or not.

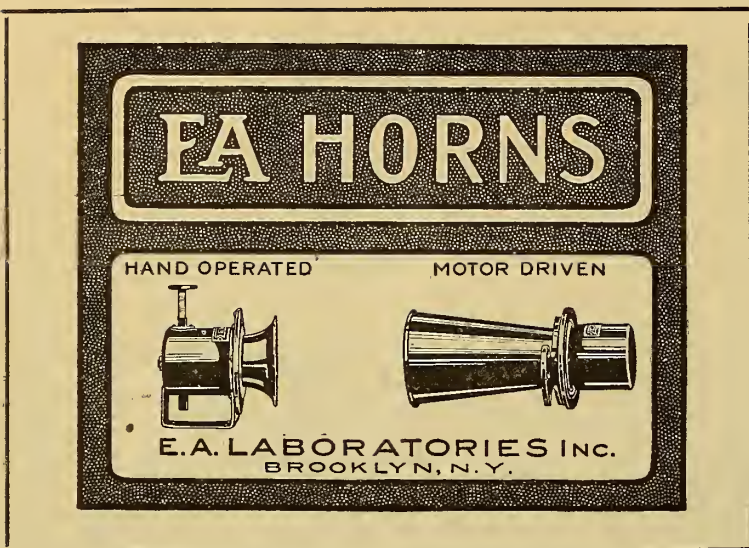
There are drivers who purposely skid their cars in wet or dry weather and who take a delight in shooting round a corner sideways. While not advocating a general adoption of this practice, we can at the same time learn from the antics of these enthusiasts how to control a car while it is skidding. The easiest way to take the ordinary back-wheel skid is to steer into it. This, as a matter of fact, is the natural thing to do when one feels the back of a car coming round, but it is judiciously combined control of brakes and steering wheel that is most effective. Should the back of the

car tend to swing round, it is useless putting the brakes hard on, as that simply locks the back wheels and tends to accentuate the skid. If the clutch is left in with the engine slowed down and the brake applied progressively and lightly at first, it will be found that the wheels can be made to grip the road again. The front wheels, at the same time, should not be locked too far over, making their line of travel at an angle to the plane of the wheel, but should be kept practically straight and only turned a little until it is felt that they begin to grip. These movements naturally have to be carried out quickly if disaster is to be averted in congested traffic, but even the least experience of drivers must realize how intuitively the movements are made once the idea has been grasped. Front-wheel skids are more dangerous and usually harder to check. If the brakes are judiciously used, however, the back of the car can generally be prevented from swinging round too far, and a moderately straight course can be kept.

Kindly mention

"THE ORIENTAL MOTOR"

when referring to advertisements.



GASTINE

The Gasolene "Economizer"

Positively prevents Carbon formation. The prime cure for motor troubles. Used on all types of gasolene and kerosene engines. It actually increases power, speed and mileage 25 to 40%.



GASTINE is a gasolene purifier in tablet form.

It not only reduces fuel bills more than 25% but it assures easier hill climbing, better sparking, faster ignition and prevents back-firing.

GASTINE is guaranteed non-injurious and is sold with "MONEY BACK" guarantee.

No motorist can afford to be without it.

Sample box of 100 tablets sent prepaid for **One Dollar**

GASTINE is endorsed and recommended by the National Ford Owners Club (Inc.). New York City, under Certificate No. 878.

Trade Mark
Reg. U. S. Pat. Off.

THE GASTINE Co., Bridgeton, N. J., U. S. A.

THE CONTINENTAL IMP. & EXP. CO.

Exclusive Agents for China.

15 MUSEUM ROAD

SHANGHAI

Phone C. 3088

WINDSOR GLASSES

The Vogue in Eyewear

Let us show how becoming to you WINDSORS are.

We supply all kinds of spectacles:

Motor Goggles,

Sun Glasses,

Crookes,

Torics,

Luxfels,

Kryptoks ground according to prescription.

Branches:

PEKING, TIENTSIN, HANKOW, CANTON,

HONGKONG, CHANGSHA, NANCHANG.

CHINESE OPTICAL COMPANY

Head Office:—P352 Nanking Road, Shanghai.

Telephone C. 3895.

司公鏡眼益精國中



COMMERCIAL AIR ROUTES IN CHINA.

The air over and about Shanghai may soon be filled with the droning of perfect working engines of commercial airplanes, according to a recent announcement made in Japan by Major Stevenot, director for the Far East of the Curtiss Airplane Company, who has headquarters in Manila.

Delivering tobacco salesmen in the interior of China and carrying physicians and medical supplies to interior points of the Philippine Islands are two of the tasks announced by the Curtiss Company, as well as the opening of branches in China and Japan of the organization.

The British-American Tobacco Company, according to the Curtiss publicity, has purchased six Curtiss planes to carry their men into the interior, partly to save time in transportation and partly to advertise their brands.

In the Philippines, the administration has entered into a contract with Major Stevenot for the transportation of doctors and their supplies of virus, antitoxins, and other anti-plague supplies to points out of the route of ordinary travel, the measure being taken to obtain the quickest possible relief in case of epidemics.

An aerial taxi service has already been established in Manila and the citizens of that port are going aloft daily. There has been a large number of air joy riders, including Governor-General Harrison of the Islands and his wife.

In view of the recent contract placed with the Handley-Page Company by the Chinese Government, the Italian Rome-Tokyo flight, the advent of the Curtiss Company, and the organization of the Shanghai Aero Club, the development of aviation in the Orient and in China seems assured on a commercial basis.

MOTORS IN SOUTH AFRICA.

In spite of the shortage of shipping, which was a serious hindrance to the trade in foreign automobiles in South Africa in 1917, the volume of imports in motor vehicles and supplies was fairly well maintained. The gross value of the imports of motor vehicles, accessories, tires, gasoline, etc., into the Union of South Africa increased from \$8,594,200 in 1916 to \$9,948,080 in 1917, or by about 15½ per cent. However, the advanced prices of all goods coming within these categories indicates a higher aggregate cost rather than a larger volume of business. Imports from the United States amounted to \$5,279,943, or 53 per cent of the total; the United Kingdom furnished \$1,872,639, or 19 per cent; and the remaining 28 per cent consisted of the combined imports from all other countries. In 1916 the percentages were as follows: United States, 55 per cent; United Kingdom, 24 per cent; other countries, 21 per cent.



**Chandler, Hupmobile and Dodge Brothers'
Limousines are Cars of Comfort
in all Seasons.**

You may laugh at the rain and the snow, or at the winds—if you have one of our Limousines. In fair weather or foul there are no better Cars than these.

They are of handsome lines and finish. Luxuriously upholstered, uncommonly restful and comfortable. The highest development of the modern coach-maker's art, mounted on the famous CHANDLER, HUPMOBILE and DODGE BROTHERS' CHASSIS, and equipped with distinguished marvellous motors. The finest Limousines in Town.

Max Friedman

Sales Manager.

THE SHANGHAI GARAGE Co., Ltd.

OPERATING

THE STAR GARAGE AND THE EASTERN GARAGE.

Our Main Show Room, Star Garage, 125, Bubbling Well Road, Shanghai

TRACK LAYER IS NEW DEVICE ON TRUCK. MASS PRODUCTION CAUSES BRITISH MERGER

American Invention Solves Sand and Muddy Road Problem.

There is about to be placed on the American market an attachment for trucks, known as the Gregory track layer for trucks, which will open up an entirely new field for truck operation.

Today truck users throughout the country are not receiving the service from their trucks that they should. Unless fields are very dry farmers are unable to get around over them with their motor equipment. In sandy and swampy localities it is necessary to keep the good roads with trucks and convey loads to them in the best way possible.

The Gregory track-layer for trucks is an attachment similar to the caterpillar tractor and the tank method of locomotion that can be installed on any truck in from two to two and one-half hours without altering the truck, which entirely overcomes the present difficulty in hauling loads over loose, sandy or muddy ground.

This attachment gives 100 per cent service under all conditions.

The saving of labor in places where it is necessary to haul loads out to hard roads and transfer same to trucks varies with locations, but is a very large item.

Four Well Known English Companies Consolidate to Fight American Competition.

Feared invasion of the American car in foreign territory has prompted the merger of four large British concerns which will enter upon mass production in order to fight the serious rivalry which the American car presents. The following firms are interested in this consolidation: Harper Sons and Bean (Ltd.) of Dudley, Tipton and Smethwick; Swift (Ltd.) of Coventry; Vulcan Motor and Engineering Co. of Southport; and the British Motor Trading Corp.

Harper Sons and Bean are manufacturers of the Bean car, which is based on the Perry light-car design, and was introduced through the motor exhibition. Swift's is an old and well-established concern; the Vulcan has new productions, a 16-horsepower model, a 12-horsepowers light car, and an 8 cylinder chassis, also making their first appearance at the exhibit. The British Motor Trading Corp. is the recently formed company, interested in acting as wide distributing agents, and has acquired considerable control over various large existing agencies. Its capital is \$9,733,000.

The capital of this combination, it is believed, will be \$29,199,999 divided into three million ordinary and three-million eight per cent. participating preference shares of £1. Representatives of each of the amalgamating concerns will be on the board of directors.

SHANGHAI'S PIONEER TRUCK TRANSPORTATION.

The Possibilities of Transporting Merchandise With Motor Fleet Recognized By P. H. Neubourg.



A portion of the Truck Fleet of the China Garage Company.

Up until August 1919 the services of the motor truck had been enlisted by only a few of Shanghai's various industrial interests, motor cars had long been in use for public service but the utilization of the motor freighter as a public service conveyance of cargo and merchandise had not been conceived, or if conceived had not found realization. Many were convinced of the possibilities of truck transportation in other countries but as in the case of many other developments thought China and Shanghai not "far enough along" to venture forth into any such service.

However, looking toward the future development of business in Shanghai and the increasing demand for safe and rapid transportation of cargo, P. H. Neubourg, manager of the China Garage Company of Shanghai, took the first step forward as a pioneer in the organization of a public truck transportation service and in August, 1919, the first of the yellow fleet bearing the name of the C. G. C. Truck Service appeared on the streets of the city. They were soon followed by others and taking the lead of this organization other trucking lines were established until the city of Shanghai has at present not one but several commercial motor freight companies.

Subsequent developments have done much to substantiate the belief which was Mr. Neubourg's when the truck service was begun. The fleet of the China Garage Company from a small beginning now employs from twenty to twenty-five trucks, practically all of the Republic make, that truck having been found the most satisfactory under all conditions after a series of experiments by Mr. Neubourg. The truck capacities run from one to three and one-half tons.

The fleet is now engaged in the transportation of general cargo and merchandise within the city of Shanghai, such as heretofore has been carried only by wheelbarrow and coolie cart. As the service progresses other modern equipment is being added such as cranes and other mechanical devices which will facilitate loading and the cutting down in other ways of the lost time of transportation and in increasing the daily tonnage and efficiency of the organization.

The crew of each truck, under ordinary circumstances, is one driver and four coolies. Under exceptional circumstances the crew is enlarged to take care of the work in hand. The haulage has been so systematized by Mr. Neubourg that coolies are stationed at each end of the journey loading and unloading and under common conditions, it has been found by the China Garage Company that one truck will make fully four trips to one of the string carts, hitherto employed for freightage, without the attendant loss of time in traffic delays or the breakage and loss from the merchandise transported.

Speaking of the development of motor truck transportation in Shanghai both present and future, Mr. Neubourg said recently:

"When the truck transportation service of the China Garage Company was first inaugurated there were many who shook their heads dubiously and advised us not to undertake such a venture as Shanghai was not far enough along in its development to support such a fleet. They also held up the cheap labor of the wheelbarrow and string cart coolies as a competition which could not be coped with by a more expensive truck organization.

“However, while our fleet has only been in operation since August of last year, the returns up to date have been sufficient to satisfy us that there is room for a commercial motor freight service in Shanghai and that the future of that service is such that within a very short time all of the haulage within the city of Shanghai, with few exceptions, will be by truck.

“We have met with opposition naturally both from the owners of the wheelbarrows and string carts and from foreign firms who fail to realize what truck transportation means to them. They have become accustomed through the use of years of string carts and wheelbarrows and they cannot understand the increased efficiency of the truck and what it will mean to them. Others taking the humane side of the argument have opposed the establishment of the service because of the fact that many wheelbarrow and cart coolies will be thrown out of employment.

“The latter argument contains many fallacies because at the present time in Shanghai there are about 3,000 string carts. The trucks needed to perform the same service would be approximately 1,000 allowing for the added increase in tonnage of the next five or ten years. Each truck of our service carries four coolies, which would mean that 1,000 trucks would furnish employment for 4,000 or more coolies in addition to the drivers. The remaining coolies, estimating 4 to 5 to a cart, could find employment as stevedores, there being a shortage of such labor at present on the water front. Thus all of the coolies would not be thrown out of employment and many would be given better positions since we pay a bonus in our service for increased efficiency and the number of trips made by each truck and its crew daily.

“The truck is and will be in the future one of the most vital factors in the industrial and commercial development of Shanghai and China generally. Particularly will this be true when road development is realized in this country and motor truck trains will be speeding inland carrying merchandise to points which have hitherto been untouched. Many persons realize this now but the trend of development will bring the realization to all vitally concerned in the progress of China.”



One type of Truck used in the C. G. G. Truck Service

THE ORIENTAL MOTOR WILL BE APPRECIATED BY YOUR MOTORIST FRIENDS ABROAD.

Just at this time of the year you are thinking of something to send your family and friends back at home. Since you have in the past undoubtedly sent innumerable characteristic gifts, why not send a year's subscription to THE ORIENTAL MOTOR, a monthly reminder of your thoughtfulness and a record of the development of the modern days in China?

Motorists the world over are interested in motor cars and their development in every country. The development of the motor car industry in China is one which will engage their interest and enthusiasm and few persons either in Europe and America are not interested in this development from the viewpoint of motor car owners.

Obey that Impulse—Now—To-day

And fill out the attached coupon. THE ORIENTAL MOTOR WILL BE A MONTHLY LETTER ON THINGS MOTORIZED AND GENERAL FROM CHINA AND THE FAR EAST.

THE ORIENTAL MOTOR,

FIVE HONGKONG ROAD,
SHANGHAI.

Please place the following name on your mailing list:

NAME

ADDRESS

And send statement to me at the following address and I will remit the Subscription price of \$5.00 Mexican.

NAME

ADDRESS.....

MOTOR CAR

INSURANCE

REDUCED RATES
AND
SPECIAL CONDITIONS

GENERAL

ACCIDENT, FIRE AND LIFE
ASSURANCE
CORPORATION, LIMITED.

For prospectus apply to the

FAR EASTERN MANAGER,
4A PEKING ROAD, SHANGHAI.
or **WHEELOCK & Co., French Bund.**



EYES that are tired and easily irritated find welcome relief when protected by lenses of

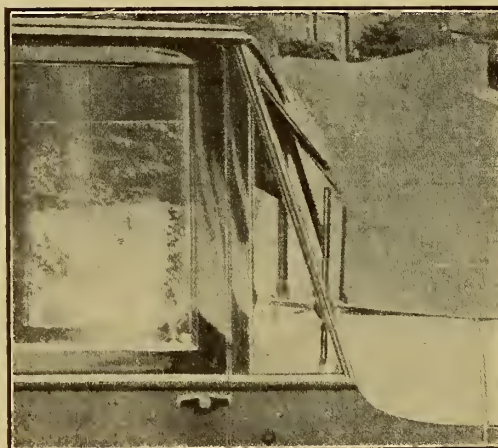
**WELLSWORTH
CROOKES GLASS**

Light entering the eyes through this remarkable glass is not perceptibly dimmed, yet harmful light rays are excluded. Your eyes deserve Crookes.

N. LAZARUS,
REFRACTING-OPTICIAN
17, NANKING ROAD, SHANGHAI.

OPEN VISION SLIT PROVIDED BY DOUBLE WINDSHIELD.

An automobile windshield designed to exclude rain, snow, and drafts, without obstructing the driver's view, even by glass, is being placed on closed cars of a well-known American make. Three panes of glass are used. Two of these are pivoted in a slanting frame, while a third is installed at the bottom of a vertical frame back of the other. The frames meet at the front of the roof, and are approximately 10 in. apart on the cowl. By pushing forward the



*Three Panes, of
Glass arranged in
Two Frames Make
the Double Wind-
shield.*

front panes until their edges are separated about 2 in., a vision slit on a level with the eyes of the person at the wheel is provided. When the machine is in motion a vacuum is created between the two sections of the windshield, with the result that air is drawn out of the car body, instead of being forced into it.

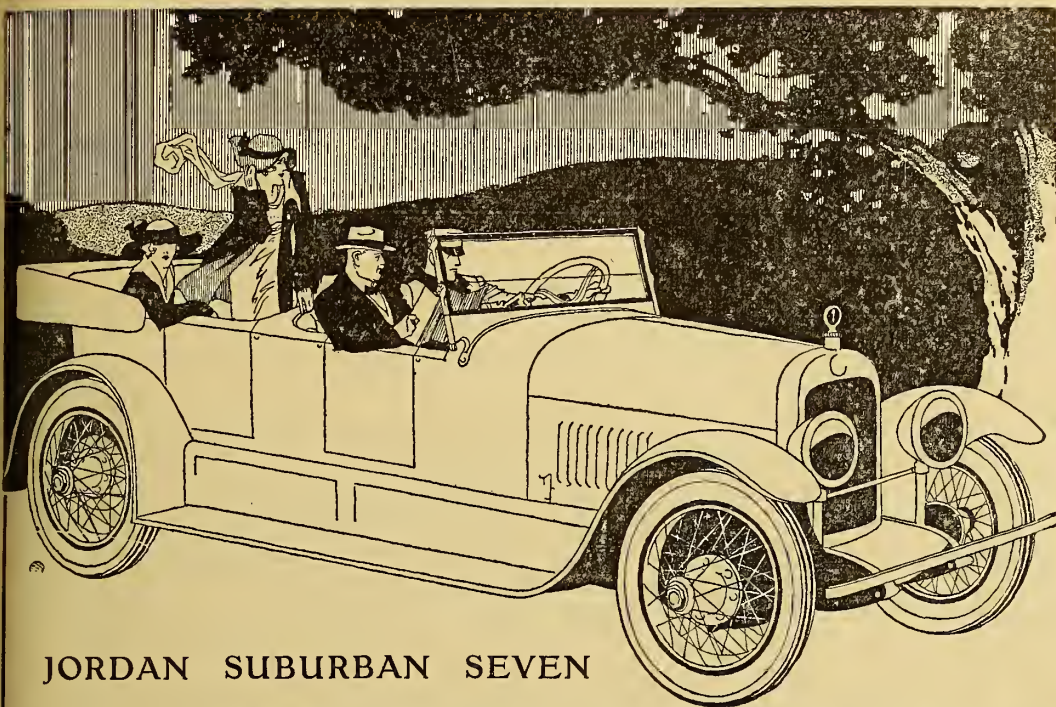
TRANS-ATLANTIC FLYER KILLED.

Sir John Alcock, the hero of the Transatlantic flight, has met his death in a tragic manner while flying from London to Paris. The airman was flying in a heavy fog near Rouen when he struck a tree and was killed.

AUTO INDUSTRY IN BELGIUM.

Before the war there were twelve automobile factories in Belgium, located in the neighborhood of Liege, Charleroi, Brussels, and Antwerp, employing 4,000 to 5,000 men. The annual production, chiefly private cars and motorcycles, approximated 4,500 to 5,000 automobiles and chassis and 7,000 to 8,000 motorcycles, with a total value of some \$11,000,000.

Mass production in series of standard types of automobile is not characteristic of the Belgian plants, but special attention is given to the construction of engines and to satisfying the foreign market, especially South America, as to form and decoration.



JORDAN SUBURBAN SEVEN

DUE SHORTLY



MOTOR CARS

**ALSO AGENTS
FOR
ELGIN SIX.**

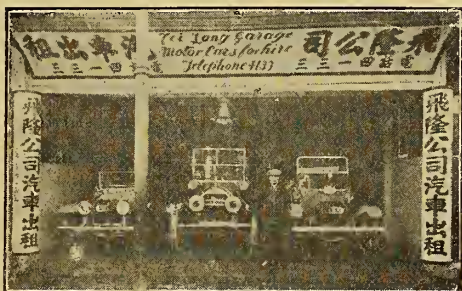
THE FEI LUNG COMPANY

OPERATING

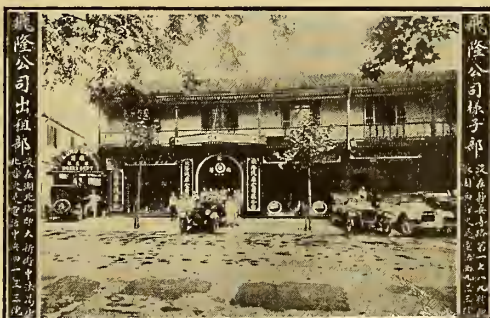
THE FEI LUNG GARAGE

**HIRE
SERVICE**

**153-4
Hupeh Road
Phone C. 4133**



SHANGHAI AUTOMOBILE Co.



**SHOW
ROOMS
AND
SHOPS
F. 1787
Bubbling
Well
Phone W.
933**

**RED SPOT SEARCHLIGHTS
FORD PARTS**

**GOOD YEAR
TIRES**

**INDIAN MOTOR CYCLES
1 & 2 Cyl. IN STOCK**

AMERICAN SOLUTION OF GERMAN TRAFFIC PROBLEM.

Are you a nervous motorist, panic-stricken every time your car just misses running down a child playing in the road? Here's what they did to solve the problem in Coblenz, Germany, according to a Red Cross worker there just returning from war service.

"In Coblenz," she says, "the situation became most annoying. The children would play in the streets in spite of all admonishments. It was particularly harrowing and nerve-racking for army motor truck chauffeurs, who came whizzing along on official business to stop and pick their way through the throngs.

"At last some one suggested a way to keep the children

from the roads. Public notices were posted up announcing that all children found playing in the middle of the road reserved for conveyances would be publicly spanked. If the offence was committed again the child's father would be given three months of hard labor. That was to impress it on the parent's mind.

"There were six cases. Six children were publicly spanked, with a representative of every family in the town present. The father was asked to officiate, which he did with such ardent enthusiasm that the Americans were compelled to ask him to stop. The rest of the children stayed out of the roads after that, and not a father was sentenced to three months at hard labor."

SHANGHAI HORSE BAZAAR

AND

MOTOR COMPANY, LTD.

Exclusive Agents For :—

BERLIET CARS

STEARNS CARS

STUDEBAKER CARS

SCRIPPS-BOOTH CARS

ARROL-JOHNSTON CARS

THORNYCROFT TRUCKS

SAVAGE TIRES & TUBES

PREST-O-LITE BATTERIES

STEWART-WARNER PRODUCTS

And various lines of Accessories.

SHANGHAI

36 Bubbling Well Road

'Phone W. 1641

AUSTRALIAN AIRMAN HOPS FROM ENGLAND HOME.

Captain Ross Smith Crosses Europe and Asia in Ten Days Flying Time.

Another chapter has been added to the advance of modern aviation by the flight of Captain Ross Smith, Australian airman, from Hounslow, England, to Port Darwin, Australia, in ten days flying time. An interesting feature of the air jump is the fact that it was done with comparatively little preparation.

After waiting several days for a favourable turn in the weather Captain Smith took the air on the morning of November 15 and started across the Channel to map out by the actual flying a transcontinental air route across Europe and Asia to his home land of Australia.

The record of the flight as given by the "Sydney Sun" runs:

"Started in inclement weather. Food frozen, too hard to eat. . . . Got bogged while starting off from Pisa on November 14th, owing to rainstorms; was imprisoned in machine all day. Finally restarted on November 15th."

The start was sensational, the mechanic holding the tail down until the machine was working. He then made a running jump into the cockpit and was hauled aboard as the machine was leaving the ground.

Rain and storm were encountered most of the way to Singapore. The diary records continuously "Vimy going perfectly."

At Ramadie a gale was experienced on the night of November 20th, and the machine was pegged down. It was an anxious time. The troops turned out and held the machine down for two hours.

The "first decent weather" was met at Bunder Abbas on November 21st, which "cheered all considerably."

Captain Smith rested all day November 26th, at Delhi.

He was escorted for 50 miles from Bangkok on December 2nd by four Siamese and for three hours, at an altitude of five hundred feet, were unable to land and blinded by rain "the worst conditions encountered."

The landing at Singora aerodrome was "bad and stumpy," and the machine's tail fitting was broken. The inhabitants were very excited at seeing their first aeroplane.

The final entry in the diary is that of December 4th, Captain Ross Smith's birthday when he arrived at Singapore. He writes "Hope Port Darwin December 10th." Therefore he arrived a day ahead of his expectations.—While not as spectacular as the trans-Atlantic flight, Captain Smith's performance is of substantial gain to the development of commercial aviation and will do much toward the establishment of a permanent air route from England to Australia, a route which is now impossible except by sea. It will also give an impetus to the working plans of commercial aviation in the other countries of the world.

GETTING THE FUR COAT OUT OF THE MOTH BALLS SHOULD BE A REMINDER THAT YOUR AUTOMOBILE BATTERY NEEDS A LITTLE EXTRA ATTENTION.

"The average motorist," said the Manager of the Shanghai 'Exide' Service Station, the other morning, "is a queer combination of sound commonsense and unsound easy goingness. And what parts of his car he never sees or hears a complaint from he is most prone to neglect. And that, of course, is mainly why the starting battery suffers—it never complains.

"It does its work, right up to the point where it has nothing more to give, under the most negligent and cruel treatment. But, of course by the time it has reached such a point it is in mighty bad shape, and building it up again is going to cost Mr. Careless Motorist a penny that he might very well have saved himself.

"And all this in spite of the fact that we are continually writing our customers—talking to them, sending them folders and circulars on the subject of getting better performance and longer life from the battery and keeping down big repair bills by giving it the right kind of service at the right time. Right now we are sending out a little folder showing the importance of giving the battery proper storage when the car is laid up for the Winter. It has been the bad habit of many automobile owners at the approach of cold weather to simply run the old bus, fully equipped, into the garage and then lock the door upon it till next Spring.

"Certainly so far as the battery is concerned, this is a mighty poor proceeding. Inside of the battery, owing to its chemical nature, a certain sort of action and reaction is continually taking place, even when it is idle. For this reason it demands certain attention at regular periods. This attention can best be given it when it is stored under such conditions and superintendence as only the battery expert can give it. Because of this, we advise our customers to remove their batteries from their cars, sending them to us to be stored and cared for in our storage department. The cost of Winter storage is small and there is assurance that nothing detrimental can happen to the battery during Jack Frost's Reign."

CALCUTTA LIKES MOTORS.

Automobiles are now being used quite extensively in Calcutta, India. There are now licensed to operate 4,617 motor cars, 1,276 motorcycles, 109 motor lorries, and 585 taxicabs. Road conditions are good generally.

There is no need of wondering where you can purchase motors and motor supplies. Look at The Buyer's Reference Guide, an up-to-date record of dealers and their lines published each month at the back of the issue of "The Oriental Motor."

PRIVATE INSTRUCTION

Given by an Expert Foreign Driver and Mechanician. Course for Driving only or to include full Instruction in Care, Adjusting and Maintenance as desired.

Hours to suit pupils

For further particulars

Apply; "INSTRUCTOR"

c/o ORIENTAL MOTOR.

NETHERLANDS GUTTA-PERCHA CO.

SINGAPORE RUBBER WORKS

SINGAPORE—SOURABAYA—BATAVIA—CALCUTTA—SHANGHAI.

**Vulcanizing Compound and Canvas
Radiator Hose
Rubber Matting
Motor Pump Tubing
Solid Tires**

Large stocks at our Shanghai Offices and Stores
17 MUSEUM ROAD, SHANGHAI.

TALCUM POWDER WILL REMOVE GREASE SPOTS.

Grease or oil spots on clothing may be cleaned, if they have not been allowed to stay too long, by sprinkling the spot with talcum powder, which should be well rubbed in. After the first layer is rubbed into the cloth sprinkle more powder over the spot and let the garment stay for two or three hours. This gives the talcum a chance to soak up the grease. Then brush the spot briskly with a stiff brush and usually the offending stain will depart. It is important to apply this treatment while the spot is fresh.

MILLIONS WASTED IN TIRES.

Lack of Knowledge Causes Discard Before Full Service is Obtained.

“The value of the tires thrown away last year before they had given all their mileage totals a sum large enough to build three good transcontinental highways across the United States, according to H. C. Steiner, China representative of The Goodyear Tire & Rubber Company.

“Three fourths of this enormous waste can be saved by the proper use and care of tires, and tire manufacturers are just as eager as car owners themselves to see this waste eliminated.”

“For, if the use of motor cars is to become more universal in China, they must be made more and more economical. This means that cars and their equipment must be used and cared for properly. Particularly does this apply to tires.”

“The first essential toward utmost mileage—minimum tire expense—is to select the proper make and type of tire. Then follows the selection of the correct size and determining the proper inflation pressure. This is made easy by the following table which was worked out by the Experimental Department of The Goodyear Tire & Rubber Co.

Proper Loads and Inflation Pressures for Pneumatic Tires

Note—Pressure depends not alone on the tire's size but also on the load it is to carry
AMERICAN SIZES

Gross Carrying Capacity of Goodyear Tires								
Infl. Press.		TIRE SECTION DIAMETER						
C'rd	Fab'c	3 in.	3½ in.	4 in.	4½ in.	5 in.	5½ in.	6 in.
27	30	250						
32	35	290	360					
36	40	335	410	500				
41	45	375	460	560	675			
45	50	415	515	625	750	875	1000	1140
50	55	460	565	690	825	960	1100	1255
54	60	500	615	750	900	1050	1200	1370
59	65		670	815	975	1135	1300	1480
63	70		720	875	1050	1225	1400	1595
68	75			940	1125	1310	1500	1710
72	80			1000	1200	1400	1600	1825
77	85				1275	1485	1700	1940
81	90				1350	1570	1800	2050
86	95					1660	1900	2165
90	100						2000	2280

These pressures are minimum, not maximum
MILLIMETER SIZES

M/M	85	90	105	120	135	150
35 lbs.....	350	370				
40 “.....	395	420	525			
45 “.....	445	470	588	720		
50 “.....	500	530	655	800	945	1140
55 “.....	545	580	725	885	1040	1255
60 “.....	595	630	790	940	1130	1370
65 “.....	645	690	855	960	1225	1480
70 “.....	695	740	920	1120	1310	1595
75 “.....			990	1200	1415	1710
80 “.....			1050	1280	1510	1925
85 “.....				1285	1575	1940
90 “.....				1440	1700	2050
95 “.....					1790	2165
100 “.....					1890	2280

The figures in heavy type show the ideal load per wheel for each size of Tire named, and constitute the specification from which maximum riding comfort is obtained.

“It will be found from the above table that if the tires of a car equipped with 34 x 4 inch tires are inflated to 75 pounds pressure each tire will have a carrying capacity of 940 pounds while if only 50 pounds pressure is used the carrying capacity on the same tire decreases to 625 pounds or a total carrying weight for the four tires of only 2500 pounds and a greater load will cause the side-walls to break down and the tire will blow-out eventually.

“In working out the table it is well to consider the fact that usually the rear tires carry more weight than the front ones and in order to determine the division accurately it is advisable to weigh the front and rear separately, with a normal load. If this cannot be done, for all practical purposes 60 per cent. can be calculated as the average weight on the rear and 40 per cent. on the front.”

“If the car owner will interest himself sufficiently in his tires to determine the required pressure and then purchase a pressure guage and check his inflation personally at least once a week he has taken a big step in securing greater tire mileage. Unfortunately the great percentage of owners leave this matter entirely to the chauffeur and it has been my experience that in 90 per cent. of the instances where this is done in Shanghai the chauffeur is not inflating the tires to the required pressure. I have also found that for some reason the chauffeur, particularly in the summer time has a fear of putting too much air into the tires. Investigation has proven that on the hottest days the increased pressure will not exceed 10 per cent. and this is so small that it can be left out of consideration entirely. There is a much greater danger of under-inflation than over-inflation and since a 4 inch tire where the recommended pressure is usually about 80 pounds is tested out at 150 pounds pressure before leaving the factory there is a safety factor here of two to one.

“When cars are equipped with enclosed bodies, thus adding greatly to the total weight it is important that this extra weight be taken into consideration in purchasing tire equipment.

“One sure way of avoiding overloading is to equip with oversize tires, for a large tire requires less inflation pressure for a given load than a smaller tire.

“And not only are oversize tires easier riding but they more than pay for their higher cost by the greater mileage they deliver.”

“This chart showing regular sizes with their oversizes which will fit the same rims will be valuable to the motorist who is interested in reducing tire expense.”

INCH SIZES.

Regular	Oversize
30x3	31x3½
30x3½	31x4
32x3½	33x4
32x4	33x4½
34x4	35x4½
32x4½	33x5
34x4½	35x5
36x4½	37x5

MILLIMETER SIZES.

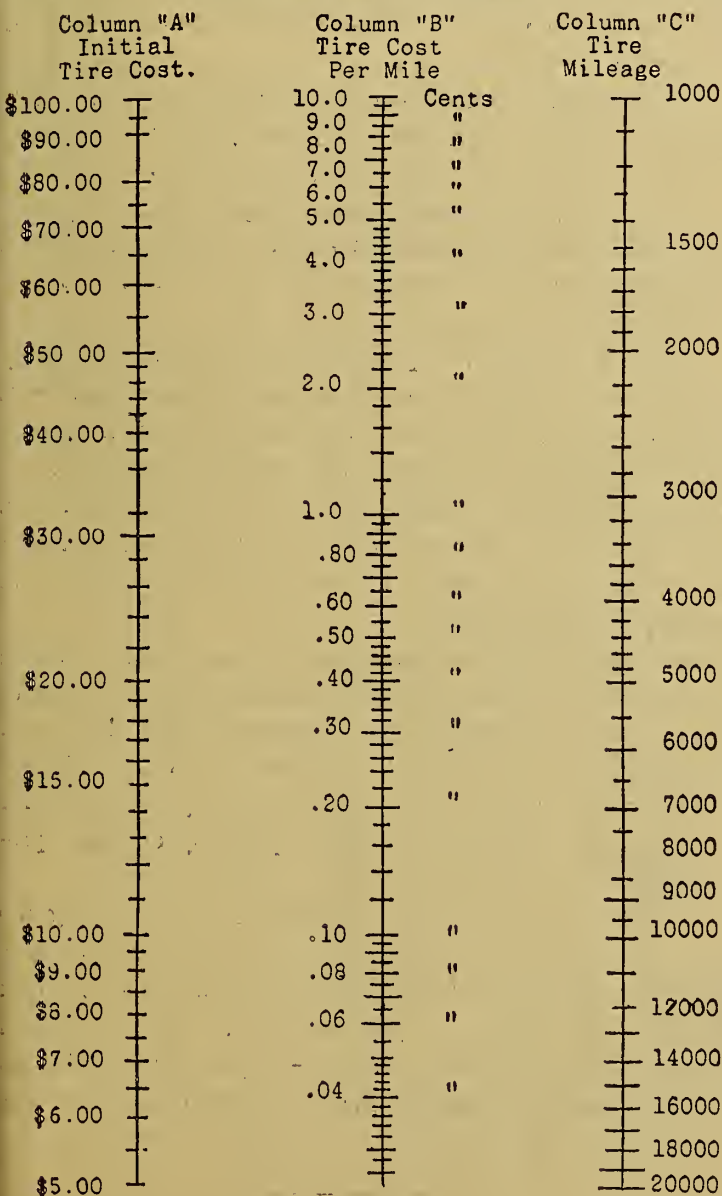
650x65	700x80
700x85	710x90
750x85	760x90
810x90	815x105
815x105	815x120
875x105	920x120

820x120	820x135
880x120	880x135
895x135	895x150
935x135	935x150

“To illustrate the use of this table in connection with the load and inflation table we will note that the carrying capacity of an 815x105 millimeter tire at 70 pounds pressure is 920 pounds. Oversizing with an 815x120 millimeter tire we find that the same pressure gives a carrying capacity of 1120 pounds per tire or an increase of 800 pounds for all four tires.

“Many motorists do not know how much their tires are costing per mile of service. In order to facilitate determining this cost The Goodyear Tire & Rubber Company recently prepared this chart.”

(COST PER MILE CHART).



TO FIND your tire cost per mile, you must first know the initial cost of your tire and the mileage you have received. Then, by stretching a thread or rubber band from the point in the first column representing your initial tire cost, to the point in the third column representing your tire mileage, your tire cost per mile may be read at the point of intersection in the second column.

MOTOR CAR INSURANCE

IS YOUR CAR INSURED?

OUR POLICY COVERS EVERYTHING THAT
CAN POSSIBLY HAPPEN TO A CAR

ALSO

COVERS LIABILITY TO THE THIRD PARTY

BEFORE INSURING YOUR CAR GET OUR RATES

PROMPT SETTLEMENT OF ALL CLAIMS

ASSURANCE FRANCO ASIATIQUE

7, Avenue Edward VII. Shanghai

J. BEUDIN & M. SPEELMAN,
General Managers.

Agencies :

TIENTSIN, 45, Rue de France.

HANKOW, Anderson, Meyer & Co.

PEKING, Regine's Building.

HONGKONG, Gérin, Dreyard & Co.

BANGKOK, E. C. Monod & Co.

TIRES GET TEN-TON ROAD BUMPS.

When a car that is rolling along at a speed of twenty-five miles an hour strikes a stone or bad bump, the tire receives a blow at the point of impact of nine or ten tons in force. Many drivers who would regard it as an insane proposition to strike one of their inflated tires a blow with a ten-ton hammer, ride merrily along day after day in their cars, taking no pains whatever to avoid the bumps. Even the best tires give way in time under such treatment.

Kindly mention

“THE ORIENTAL MOTOR”

when referring to advertisements.

“In China more so than in the States it is advisable to buy the quality casing or tube as the freight cost is just as great on an inferior tire as on one of the best quality. For this reason we advocate the use of Cord tires and Heavy Tourist tubes in the Export Field and given the proper care, the car owner can readily prove to his own satisfaction, with the aid of the cost per mile chart, why it is more economical to buy the better tire.”

INSURANCE

Fire, Marine, Life,
Accident and Sickness.

Fidelity Guarantee

AND

MOTOR CARS

Commercial Union
Assurance Company, Ltd.

Total funds exceed £32,000,000.

China Branch Office;
UNION BUILDING.
4, The Bund, Shanghai.

Oxy-Acetylene Welding SERVICE Why?

Because

1. Insures against long Shutdowns.
2. Saves the Pieces, Welds all Metals any size, shape or weight.
3. Prevents buying of New Parts.
4. Oxy-Acetylene is indispensable to the Metal Industry.
5. A Good Oxy-Acetylene Welder is an asset to a community.
6. When a breakdown puts your Machinery out of commission, no other method of repair is as efficient.

Write or Phone to

China Oxy-Acetylene Welding Works

Phone N. 2831 Works 684 East Broadway
SHANGHAI
Phone C. 1892. Office 1 Yuen Ming Yuen Rd.

A SPEED EVENT FOR FRANCE.

Inter-Allied Motor Meeting is Planned for 1920.

France in her post-war relaxation is planning in an international meeting of speed cars and drivers on a course of 700 to 750 kilometres over the new "Circuit" course just outside of the city of Le Mans, north of Tours. The Automobile Club de la Sarthe et de l'Ouest has announced its intention of organizing the "Grand Prix de France," which will be driven over this course during the early part of September, 1920.

The rules governing the race will be for engines of the "three litre" maximum type, and weight of the complete car, empty, 750 kilogrammes minimum.

French manufacturers have taken up the announcement and a number have signified their intention of entering cars in the competition, among whom are the firms of Peugeot, Delage, Ballot, Gnome-Rhone, Rolland-Pilain and possibly Renault and Panhard.

From Italy is expected with an almost certainty representatives of the Fiat plant and probably others. England will have probably as her first entry a Sunbeam.

The American racing element is expected to be especially receptive to the inter-Allied meet. Packard, Chevrolet, Frontenac, and other racing machines are said to be favorable to entry.

The first prize will probably be worth approximately 100,000 francs, though no definite announcement has been made to this effect. The club fostering the event is assured that at least four or five nations will compete and that there will be at the lowest estimate twelve to fifteen starters. On the basis of this, the event will undoubtedly assume larger proportions in the circles of motor car speedway followers in many parts of the world.

In line with the coming event is also an agitation which is being carried on at the present time with Paris as its center for a national motordrome or speedway near that city. Suggestions have been made that one of the numerous "aerodromes" near the city could be easily converted for the purpose, making an excellent speedway of large proportions.

French manufacturers are among those advocating the plan since the condition of the road systems of France is especially bad due to the ravages of the war and the lack of time and facilities for mending them. This has caused the manufacturer to look about for a place for testing his machines and the motordrome in its spare moments fits in admirably with this need.

Motor car accessories, but where can they be bought? The Buyers' Reference Guide published each month on the last page of "The Oriental Motor" gives information that answers this and all other questions of where motors and motor supplies may be obtained.

SUBSCRIBE
FOR
THE ORIENTAL MOTOR

FRENCH MANUFACTURERS SPECIALIZE.

(BY A PARIS CORRESPONDENT.)

Much comment has been made about the Paris Salon, and a certain surprise has been owing to the fact that the majority of the best French manufacturers have launched out upon specializing in comparatively expensive chassis and cars rather than turning their works over to the "mass production" principle of construction.

In a few words this is easily explained. It has been realized by the French industry that if every maker were to turn their works on to the American idea of one model only, making them in thousands, the European market would ultimately be swamped with automobiles and "cheapness" would be the only interesting feature.

It must be understood that it is practically impossible for the French manufacturers to compete with American methods on the system of assembling at the "mother works," with the splendid American organization of factories being fed by ready-made components from scores of adjacent factories, which in recent years have grown up into gigantic plants by specializing either in motors, gears, axles, chassis frames, bodies and other parts.

American methods of organization and standardization with specialized component parts and assembling are not yet ripe in Europe, and possibly much less so in France than in any other country.

It is well known that the leading French automobile firms make virtually all their component parts throughout their own works, and each one is fitting their own particular engine, not having such an enormous corporation as the Continental Motors Co., of Detroit to draw from.

It is, therefore, not surprising that the French manufacturers should specialize in their own particular product, which certainly has the advantage of keeping the automobile industry supplied with high-class, splendidly finished, if actually expensive, chassis or complete cars.

LITERATURE AND PUBLICATIONS RECEIVED.

Post and Lester Company, Hartford, Conn., accessories catalog.

Hartford Metal Products Co., Hartford, Conn., catalog
Brown Brothers, London, Broldt Electric starting and lighting system, catalog.

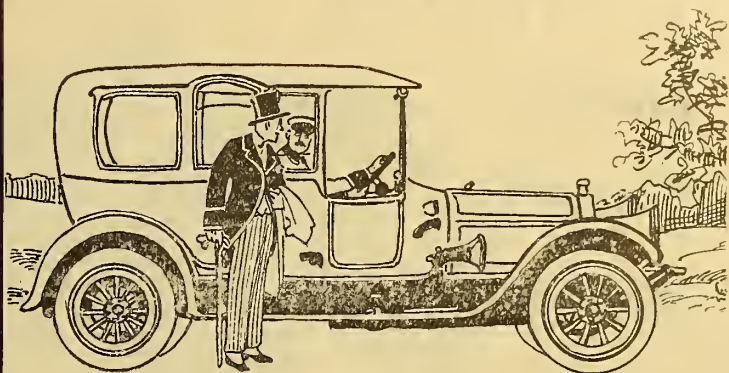
Leo Swain, London, accessories catalog.

Jones Motor Car. Co., Wichita, Kan., pictures, literature and catalog.

Buick instruction book issued by General Motors Company, New York.

Hall-Thompson Co., Hartford, Conn., Wonder-Worker finishes, catalog and prices.

Regent Motorcycles, Ltd., London, advance catalog.



Mr. ROCKEFELBILT to his CHAUFFEUR:

"Tom, you just wait me at the corner while I drop in the Tobacconist's to purchase a box of the BEAUTY CIGARETTES otherwise, I may not be able to hold myself till we reach the Club House."

The reply was:

"Yessir, but may I have a smoke on the way, too?"

Nanyang Bros. Tobacco Co., Ltd.

HEAD OFFICE

12, Nanking Road, Shanghai.

MONCHEN-GARAGE

Azabu-Dori, No. 1. Phone 608.

TSINGTAU.

Agents for:—

Scripps-Booth Cars,

Studebaker Cars,

Stearns Cars,

Savage Tires

ALL STUDEBAKER CARS

USED ON HIRE SERVICE.

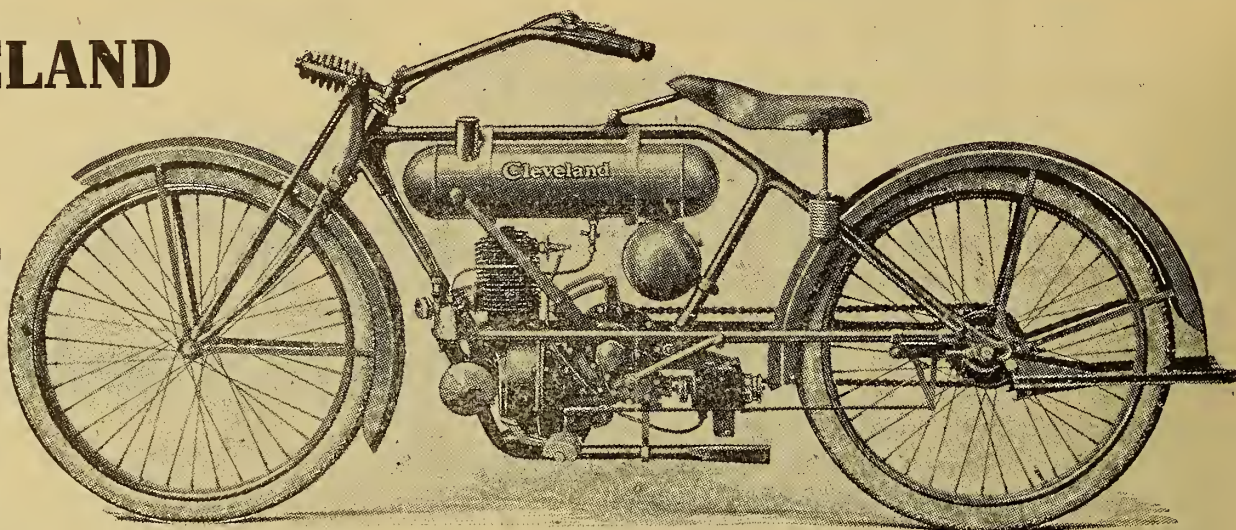
CLEVELAND

LIGHT

WEIGHT

MOTOR

CYCLES



Light in Weight—Light on Gasoline—Light in Price

Are three salient points which should appeal to every purchaser of a Motor Cycle in China, especially that of *Gasoline consumption*. And the CLEVELAND does 75 MILES to the gallon.

2½ H.P., 2-Stroke Motor. Straight Line Worm Drive.

Kick Starter. Weight 160 lbs.

Price Tls. 180 cash or Tls. 190 on time payments.

The Ideal Machine for Shanghai and Outports.

DONG CHONG BICYCLE Co.

P. 346 NANKING ROAD

SHANGHAI

'PHONE C. 1518

Also Agents for

B.S.A., Reading Standard and Emblem Motor Cycles



SHANGHAI'S NEWEST GARAGE

HIRE SERVICE ONLY

ALL NEW HUPPS

*Catering to that Class of Trade that
Desires the Best.*

GREAT NORTHERN GARAGE Co.

SHANGHAI.

14, Astor Road

'Phone: N. 1463.

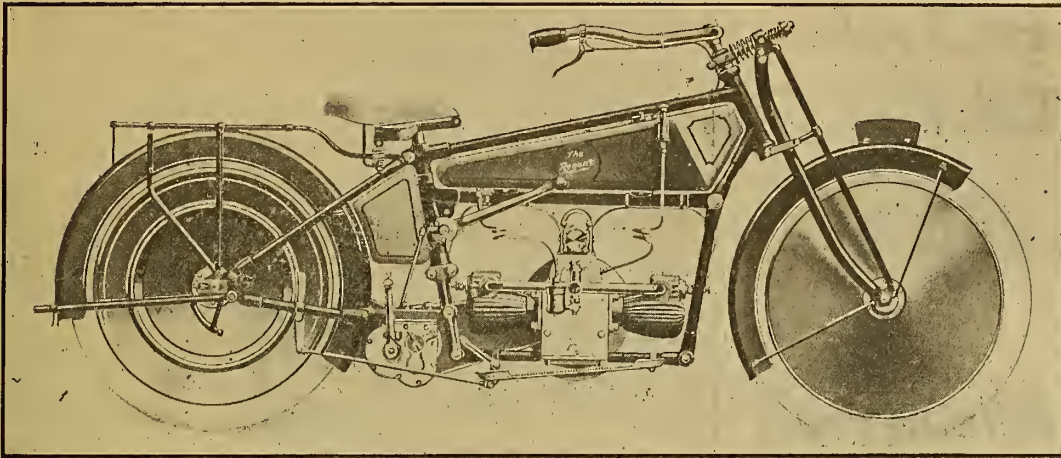
CYCLISTS FIRST MOTORISTS TO CROSS SOUTH AMERICA.

**Feat of Chileans Over "Impassable" Territory
Demonstrates Possibilities in China.**

With the present system of wheelbarrow paths and narrow roadways impassable to automobiles in China the motorcycle has been advocated as the logical automotive vehicle for cross country travel. Coming as a clinching point to this advocacy is the feat of two South Americans who recently crossed their own continent over routes called impassable. Their feat is a step forward for the motorcycle, an addition to its admirable record of the war over shell torn roads and under intense artillery fire.

The trail blazed by the motorcycle across the South American continent extended from Santiago, Chile, to

THE LATEST BRITISH CYCLE.



A new departure in motorcycle construction in the Regent Classic, just on the British market. The new machine has a 5-7 horsepower engine with horizontally opposed twin cylinders, three speeds with a five to one ratio on high, a kick starter, and disc wheels. Rakish lines give it a sporting appearance. The announced price from the factory is £115 10s.

Buenos Aires, Brazil, approximately 1,000 miles and the journey was made more significant by the carrying of a side car and a passenger. Two brothers, Benjamin and Maximo Ulloca, motorcycle enthusiasts with courage and vision, made this colossal journey through wilderness, swamp lands, sand, riding many miles on railroad embankments where there were no roads to travel on, crossing the range of the Andes, for the first time in the history of South America, completing a journey such as this, replete with dangers and exhaustive hardships, from ocean to ocean.

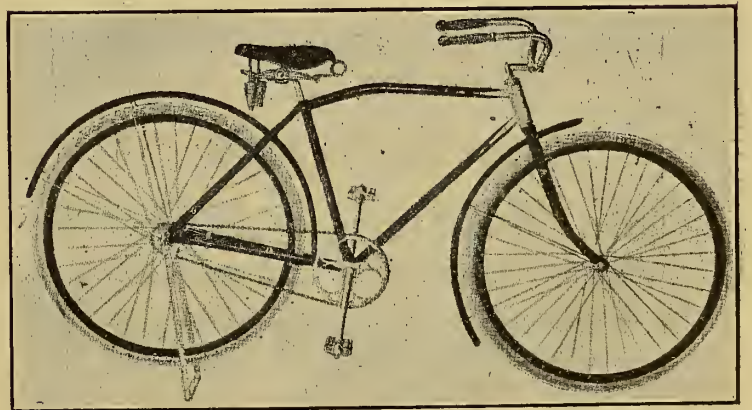
These two brothers undertook and made this journey in the face of the greatest obstacles, purely in the interests of good sport. No prizes were theirs, nor offered for the undertaking; they made no personal gain by putting themselves to the test of this grilling endurance run. But such was their success that the National Motorcyclist Club of Brazil has voted to give them gold and silver medals commemorating the feat.

From Puente del Inca to Upsallata, a distance of eighty kilometers, the young men rode on the railroad embankment, there being no road. Upon reaching Upsallata, they were lavishly entertained and special motorcycle races were held in their honor.

A short distance from Mendoza, in a pouring rain, they attempted to go through a swamp, but the machine sank into the morass and the motor sucked in quantities of mud and water before it stopped. This necessitated rather a complete overhauling before continuing the journey, consuming four days.

From then on the journey was completed through unusual hardships, the riders passing through safely, though with difficulty, to Buenos Aires, winning the distinction of being first to cross the South American Continent on a motor vehicle. The entire journey took about a month. What has been done by these two South American pioneers could

GET A BICYCLE FOR YOUR BOY OR GIRL



Well built, sturdy Machines made to stand any kind of treatment.

A Gift that will last for years.

SQUIRES-BINGHAM & Co.

17 Nanking Road, Shanghai.

"The Store of Quality"

be easily accomplished in China since the topography of this country is not so forbidding as that of the land traversed by them. The development of the motorcycle field in China has as yet received only passing notice but the passing of the next few years should see it one of the most profitable in automotive sales.

BURR PHOTO Co.

COMMERCIAL PHOTOGRAPHY

AND

PORTRAITURE

**KODAKS—FILMS
DEVELOPING & PRINTING**

**FILMS DEVELOPED
FREE OF CHARGE**

PHOTO SUPPLIES AND PICTURE FRAMING.

STUDIO

2 BROADWAY. 'Phone N. 2392.
SHANGHAI.

**PHOTOGRAPHERS TO
THE ORIENTAL MOTOR**

WONG AH ZAI

EXPERT

**REPAIRING and OVERHAULING
OF ALL MAKES
MOTOR CARS, MOTOR CYCLES**

AND
GASOLENE ENGINES

SHANGHAI.

P.512 N. HONAN ROAD

Phone N. 465

THE SUNDAY ORGAN
FOR
ENGLISH-SPEAKING PEOPLE IN SHANGHAI
IS
"LLOYD'S WEEKLY."
ONLY THREE DOLLARS A YEAR.

AIRPLANES STILL IN DEMAND.

Those who see no future in commercial aviation are dealt with totally by the "Aerial Age Weekly," New York, as follows:—

"One of these chronic pessimists who have been standing in the way of aeronautic progress was arguing with Mr. Glenn H. Curtiss that he could not see much of a future for civilian aviation.

" 'I don't know anybody who is buying an airplane,' he said, with a tone of finality, and apparently fully convinced that his argument was unanswerable.

" 'Do you know anybody who is buying a piano?' inquired Mr. Curtiss.

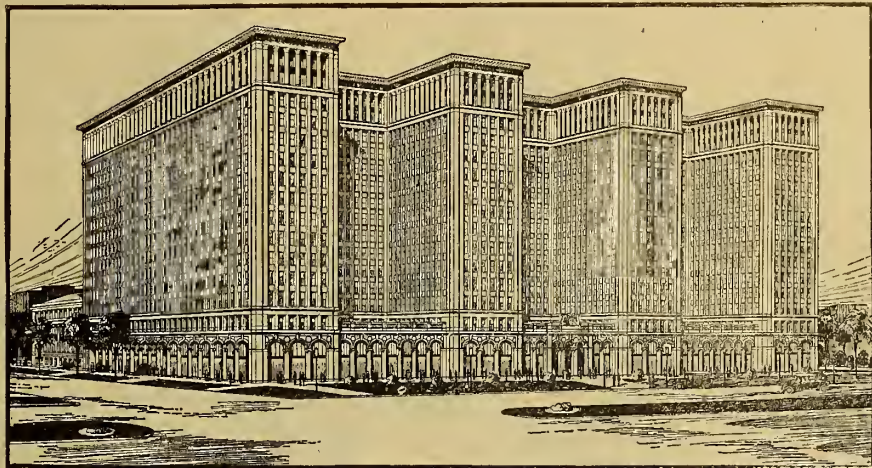
"Of course he did not, nor do you, gentle reader. You do not ever know anybody who is buying a Ford or a hat or a pair of shoes. Yet the piano-factories are as busy as ever—and the last report had it that Henry Ford had paid the best part of one hundred million dollars for the minority stock of the Ford company.

"Nevertheless, over five hundred airplanes have been sold and delivered to individual owners since March, 1919, and the reason not over that number have been delivered is that the manufacturers could not produce faster. The demand is as great for \$7,500 pleasure airplanes as it is for \$2,500 airplanes. A great many buyers acquired Curtiss training airplanes because they could not get the Oriole type of pleasure airplane—or any other type.

"The first Oriole was built for the Second Pan-American Aeronautic Exposition, which was held at Atlantic City in May, 1919. It will be recalled Roland Rohlfs flew it to Atlantic City on May 1 in a storm, carrying the Hon. Victor Hugo Barranco, special representative of the President of Cuba, as passenger. By June the demand for this type of machine caused the Curtiss Company to put it in production. It was decided to build ten, then twenty, then thirty-five, then one hundred and thirty-five. We will not give away a trade secret by stating the present number of Orioles and flying-boats sold to-day, but we may state that over one hundred people are waiting patiently—and some impatiently—for deliveries.

"Here is another case. A well-known veteran aviator secured the agency for second-hand military training airplanes and inserted five advertisements in "Aerial Age." He got over four hundred orders and inquiries—but has been unable to get airplanes fast enough to fill the orders. Another "Aerial Age" advertiser had only one airplane to sell and wanted \$7,500 for it. He sold it—and had a score of prospective customers to spare."

GENERAL MOTORS CORPORATION ERECTING \$37,000,000 HOME.



The New Home of the General Motors Company, Detroit.

More than \$37,000,000.00 is being expended by the General Motors Corporation for new construction and expansion of its present great works in the United States.

Of the total amount appropriated more than \$5,000,000.00 has been set aside for the erection of an immense fifteen story general office building in Detroit, with a research laboratory five stories in height by its side.

This structure will be known as the Durant Building, so named by the associates of Mr. W. C. Durant, President of General Motors, who in America, is called the "Father of the Automobile Industry."

The Durant Building will have a total actual office space of 875,000 square feet, while the total floor space of the building will be 1,200,000 square feet, equivalent to 30 acres. It will be approximately the same size as the office building that is now the largest in the world and will be far larger than any building whose space is used entirely by one business organization. Nearly 11,000 persons will be accommodated on the office floors in addition to the occupants of the ground and top floors where sales rooms, service station, etc., will be placed.

The building will occupy a plot of ground approximately 500 ft. by 400 ft. The office building proper will be 500 ft. long 250 ft. wide. The laboratory building will be 50 ft. by 60 ft., and is to be equipped with the most highly developed apparatus science has evolved for testing materials and manufactured units in all stages of production.

In the main building there are to be approximately 2500 offices, each 20x16 ft. The top floor will be used for dining rooms and club rooms for both employes and officials. Thirty-two elevators will be required to transport the occupants of this building to and from their offices.

The motor cars manufactured by the General Motor Corporation, in addition to a number of important automobile accessories are the following:

Buick, Chevrolet, Cadillac, Oldsmobile, Oakland, Scripps-Booth, GMC Trucks and Samson Tractors.

Total production of these motor cars, trucks and tractors for the present year will be no less than 550,000.

All the General Motors automotive manufacturing establishments, particularly those of the cars named above, will benefit from the scientific laboratories now under construction. Every piece of material that enters into the making of a motor car or other product manufactured by the General Motors Corporation has in the past undergone numerous tests to prove its goodness. With the aid of this new laboratory, equipped with everything that science has been able to devise, and such new apparatus as may be built from time to time, it is not too much to hope that important discoveries will be made in the General Motors laboratories that will do even more to popularize the automobile, both by way of lightening the weight of the car, and by using in it materials now perhaps unknown.

AUTOISTS—LOOK! MOTORLIFE

**SAVES 25% to 50%
GASOLINE**

Use 1 oz. "MOTORLIFE" to 5 gallon Gasolene
Also removes and prevents Carbon

**INSURES
MOTOR EFFICIENCY**

Price \$2.00 Gold per 32 oz. Tin.

MADE BY

MOTORLIFE MANUFACTURING Co., Memphis, Tenn.

SOLE AGENTS FOR CHINA

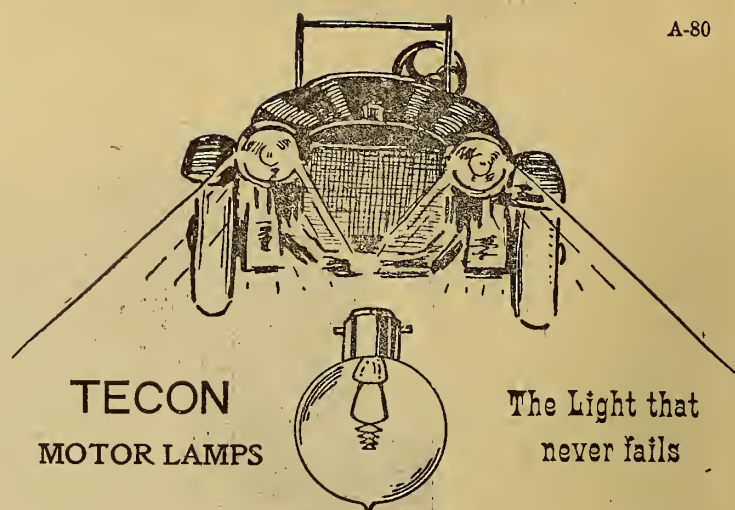
THE CHINESE TRADING CO.

10 Ningpo Road, Shanghai.

INDEX TO ADVERTISERS

	PAGE
Alliance Assurance Co., Ltd.	34
Andersen, Meyer & Co., Ltd.	33
Assurance Franco-Asiatique	49
Auto Castle	57
Auto Palace Co.	37
Brilliant Electric Co.	56
Burr Photo Co.	54
Central Garage Co.	2
China Garage Co.	17, 39
China Oxy-Acetylene Welding Co.	50
Chinese Optical Co.	40
Chinese Trading Co.	55
Commercial Transportation Co.	35
Commercial Union Assurance Co., Ltd.	50
Continental Imp. & Exp. Co.	40
Dong Chong Bicycle Co.	52, 57
Dunlop Rubber Co., Ltd.	4
E. A. Laboratories, Inc.	40
Eastern Garage	41
Excess Insurance Co., Ltd.	4th Cover
Feilung Garage Co.	45
Furukawa & Co., Ltd.	25
General Ac. F. & L. As. Corp., Ltd.	44
Goodrich Co., B. F.	25
Goodyear Tire & Rubber Co.	21
Great Northern Garage Co.	52
Höngsberg & Co., Inc., H. S.,	23
Jardine, Matheson & Co., Ltd.	34
Lazarus, N.	44
Mencarini & Co.	1
Monchen Garage, Tsingtau	51
Morimura Garage Co.	38
National Optical Co.	36
Nanyang Bros. Tobacco Co.	51
Netherlands Gutta-Percha Co.	47
North Br. & Mercantile Ins. Co., Ltd.	36
Ross & Co., Ltd., Alex.	36
Shanghai Automobile Co.	45
Shanghai Garage Co., Ltd.	41
Shanghai Horse Bazaar & Motor Co., Ltd.	46
Sparke, C. E., Insurance	4th Cover
Squires, Bingham & Co.	53
Star Garage	41
Union Insurance Society of Canton, Ltd.	19
Vacuum Oil Company	4th Cover
Wheelock & Co.	44
Wong Ah Zai Repair Shops	54
Yangtze Insurance Assn. Ltd.	38

A-80



SURE and DEPENDABLE

TECON Are the Lamps you
Should always use.

You'll no longer ask WHY if you step in and
let our American College Graduate Expert
demonstrate their Superior efficiency to you.

BRILLIANT ELECTRIC COMPANY

The Home of Lamps and Wiring Supplies

P 564 Nanking Road, Shanghai.

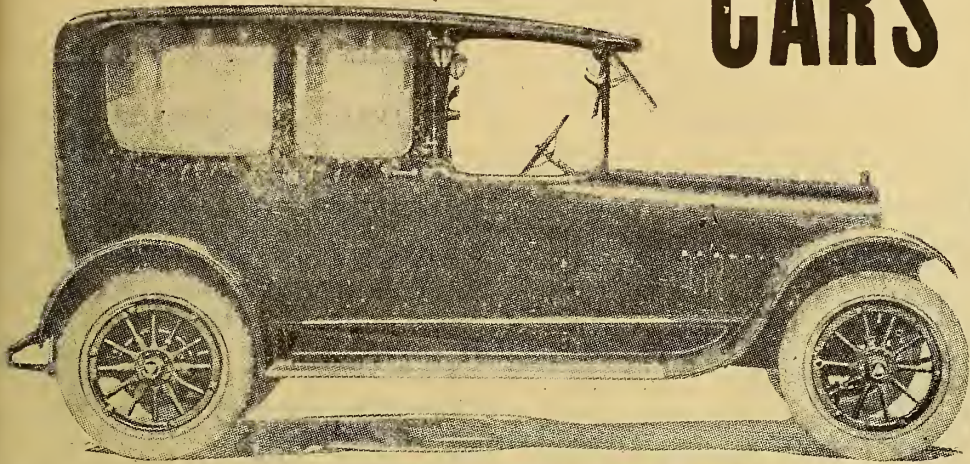
Phone: Central 4907.

MOTORS IN BOMBAY.

The annual police report for 1918 of Bombay city contains some figures interesting to motorists. During 1918 the number of cars registered was 383, of which 148 were of American manufacture. The total registrations in Bombay, up to the end of 1918, were 6,912, including 229 heavy motor vehicles. These do not include the large number of cars imported during the present year. The number of taxicabs was 250, a decrease of 44 since 1917. These vehicles were thoroughly inspected twice during the year and were maintained at a high standard of efficiency and comfort. Taximeters received special attention from the police department, with the result that no complaint of overcharging was received from the public.

Driving licences numbering 5,132 were issued and 366 motor accidents occurred during the year. Of these a little over 10 per cent. were due to the drivers' fault. There were altogether 535 persons injured, including 39 fatal cases. Of the latter, 28 were due to the fault of the drivers, and three were doubtful. There were 321 prosecutions under the Motor Vehicles Act, of which 269 ended in convictions; 709 persons were warned by the police and 22 driving licences were suspended.

IMMEDIATE DELIVERY NEW AND USED CARS



**FULL LINE OF CLOSED CARS FOR IMMEDIATE
DELIVERY AT PRICES TO SUIT EVERYBODY**

LIMOUSINES, LANDAUETTES, COUPES, SEDANS
AND TOWN CARS

COMPLETE LINE OF ACCESSORIES.

All Kinds of Repairs Made Under Foreign Expert Supervision.

AUTO CASTLE,

(OPPOSITE FRENCH FIRE STATION)

228 Avenue Joffre, Shanghai. Phone: C. 402.

THE UPRAISED HAND

No end of credit is due those men from civilian pursuits who so successfully mastered the regulation of Boston street traffic during the police strike. A reported incident of the Omaha riot period also is noteworthy. It is that of the twelve-year-old boy scout, who for eight hours handled an important traffic post voluntarily and alone, while the trouble was in progress. The parallel between traffic regulation and the invisible control exercised by etiquette has often been drawn, and it should never be forgotten. It is the upraised hand that controls the vehicular movement at the world's busiest corner, whether that be, as alleged, at Columbus Circle, New York, or elsewhere. Once that which it symbolizes is clearly and generally understood—and without disrespect to New York's "finest"—it makes very little difference whose hand it is that is raised.—"Automobile Topics."

IN FOREIGN FIELDS

Glimpses of the shows at Paris and London revealed the overseas makers still determined to produce cars in quantities, built according to American manufacturing methods, but still struggling with the inevitable problems of mass production. A further digest of the situation, pointed with information reaching New York this week, confirms this view, and further shows the British builder in particular to be pretty well held down by circumstances beyond his control. Lest this lead to the assumption that the American manufacturer is destined to have things all his own way, however, it is indicated that the tariff question may shed new light on the subject before another year rolls by.

TOLEDO OWNERS REAP BENEFITS

That "it's an ill wind that blows no good" was demonstrated effectively in Toledo during the recent trolley strike, where it was estimated that 2,500 automobile owners of that city who operated their

Always buy your
AUTO SUPPLIES
at money saving prices
FROM
DONG CHONG BICYCLE Co.
P346 Nanking Road, Shanghai.
Klaxon and Samson Horns also in Stock

GOOD YEAR
TIRES
FEI LUNG GARAGE Co.
H. 153 Hupeh Road, Shanghai.

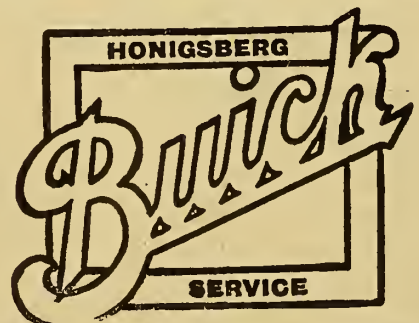
Just say you "Saw it in the
ORIENTAL MOTOR"

when writing advertisers.

OAKLAND
"SENSIBLE SIX"
CHINA GARAGE Co.
21 FOOCHOW ROAD, SHANGHAI.

Firestone
NON-SKID TIRES
CENTRAL GARAGE CO.
2a, Jinkee Road, Shanghai.

**WATCH
THE
ORIENTAL
MOTOR
For 1920**



cars at ten cents a ride took in nearly \$250,000 in fares during the 27 days that the trouble lasted. Conditions were not so favorable to the merchants of the city however, who are reported to have lost approximately \$50,000 a day.

BUYERS' REFERENCE GUIDE

The names appearing in this Index are not a part of the advertisers' contract, but are published as a matter of convenience for our readers. The publishers assume no responsibility for errors or omissions.

PLEASURE CARS

	SEE PAGE
Allen, Agents for	2
Anderson, "	2
Arrol-Johnston, "	46
Austin, "	2
Berleit, "	46
Briscoe, "	37
Buick, "	23
Cadillac, "	23
Chandler, "	41
Chevrolet, "	23
Cunningham, "	23
Dodge Brothers, "	41
Elgin Six, "	45
Fiat, "	46
Haynes, "	17
Hupmobile, "	41
Jordan, "	45
Liberty Six, "	45
Marmon, "	23
Maxwell, "	41
Mercer, "	2
Milburn Electric, "	33
Moon, "	41
Oakland, "	17
Overland, "	2
Paige, "	57
Premier, "	41
Scripps-Booth, "	46
Standard, "	41
Stearns, "	46
Studebaker, "	46
Stutz, "	23
Templar, "	2
Willys-Knight, "	2

COMMERCIAL CARS—TRUCKS

Clydesdale, Agents for	41
Dart, "	23
Defiance, "	57
Denby, "	41
Duplex, "	23
Federal, "	2
Garford, "	2
Maxwell, "	41
Paige, "	57
Stewart, "	23
Thornycroft, "	46
Walker Electric, "	33

USED CARS

Auto Castle	55
-------------------	----

TIRES

	SEE PAGE
Dunlop Agents for	4
Firestone "	2
Fisk "	41
Goodrich "	27-39
Goodyear "	21-23-45
Howe "	41
Lee "	2
Marathon "	17
Michelin "	37
North British "	41
R. O. M. "	41
Savage "	46
Singapore Rubber Works	47
United States "	33

AUTOMOTIVE EQUIPMENT

Auto Castle	57
Central Garage Co.	2
Dong Chong Bicycle Co.	52
E. A. Laboratories, Inc.	40
Fei Lung Company	45
Honigsberg & Co.	23
Shanghai Garage Co., Ltd.	41
Shanghai Horse Bazaar	46

ELECTRICAL ENGINEERS

Andersen, Meyer & Co., Ltd.	33
Auto Palace Company	37
China Garage Co.	17
Honigsberg & Co., Inc.	23
Shanghai Horse Bazaar	46
Shanghai Garage Co., Ltd.	41

GARAGES

	Phone
Andersen, Meyer & Co., Ltd. C. 778...	33
Auto Castle	C. 402... 57
Auto Palace	W. 465... 37
Central Garage	C. 3809... 2
China Garage Co.	C. 2403... 17
Eastern Garage	C. 1159... 41
Fei Lung Garage	C. 4133... 45
Gt. Northern Garage Co.	N. 1463... 52
Honigsberg Service	W. 1234... 23
Morimura Garage Co.	N. 2938... 38
Shanghai Automobile Co.	W. 933... 45
Shanghai Horse Bazaar	W. 1641... 46
Star Garage	W. 197... 41
Monchen Garage, Tsingtau...	608... 51

GASOLINE ECONOMIZERS

Chinese Trading Co., Inc.	55
Continental I. & E. Co.	40

INSTRUCTION

Private Instruction	47
---------------------------	----

INSURANCE, MOTOR CAR

	SEE PAGE
Alliance Assurance Co., Ltd.	34
Assurance Franco-Asiatique	49
Commercial Union Assurance Co.	50
Excess Ins. Co., Ltd.	4th Cover
General Ac. F. & L. Assurance Co., Ltd.	44
Jardine, Matheson & Co., Ltd.	34
North Br. & Mercantile Ins. Co., Ltd.	36
Sparke, C. E.	4th Cover
Union Ins. Society of Canton, Ltd.	19
Wheelock & Co.	44
Yangtze Insurance Assn., Ltd.	38

OILS AND LUBRICANTS

Mencarini & Co.	1
Squires, Bingham & Co.	1
Vacuum Oil Co.	4th Cover

OPTICAL

Chinese Optical Co.	40
Lazarus, N.	44
National Optical Co.	36

REPAIRS AND OVERHAULING

Auto Castle	57
Auto Palace Co.	37
Central Garage Service Station	2
China Garage Co.	17
China Oxy-acetylene Welding Works	50
Fei Lung Company	45
Honigsberg & Co., Inc.	23
Morimura Garage Co.	38
Shanghai Garage Co.	41
Shanghai Horse Bazaar	46
Wong Ah Zai	54

TRUCKING SERVICE

Commercial Transportation Co.	35
C. G. C. Truck Service	17

MOTOR CYCLES

B. S. A. Agents for	52
Emblem, "	52
Harley-Davidson, "	53
Henderson, "	2
Indian, "	41
Reading-Standard, "	52

MOTOR CYCLE SUPPLIES

Central Garage Co.	2
Dong Chong Bicycle Co.	52
Squires, Bingham & Co.	53

MOTOR CYCLE REPAIRS

Auto Palace Co.	37
Central Garage Service Station	2
Dong Chong Bicycle Co.	52
Morimura Garage Co.	38
Star Garage	41
Wong Ah Zai	54

THIS SPACE
WILL CONTAIN A SPECIAL
ANNOUNCEMENT
NEXT MONTH.

"Give Me a Quart of Oil"

The Dangers Of

This Careless Request

When you say, "Give me a quart of oil", and take whatever is poured into your crank case, you are inviting costly penalties.

If the oil is of low *quality* or *body* unsuited to your car, the cylinder walls will have no protecting film of oil and scratching will result.

Noise is often a sign of worn parts,—resulting from friction.

When a comparatively new car knocks and pounds it is generally because of undue friction, resulting from incorrect lubricating oil.

If the oil's *quality* is low, an excess quantity will be consumed and still the proper protecting film will not be maintained.

If its *body* is incorrect, it may fail to reach and protect all moving parts.

In either case, excessive friction-drag results. Your fuel and repair bills mount up.

Our Chart of Recommendations specifies the grade of Gargoyle Mobiloils that engineering

analysis has proven correct for *your* car.

Their high quality has been proven in actual service over many years.

We would be glad to send you our 64 page booklet containing solutions of motorists' problems.

Vacuum Oil Company

No. 1. The Bund

Shanghai

GARGOYLE



Mobiloils

A grade for each type of motor.

X POLICY S OF MOTOR CAR INSURANCE

COVERING ALL DAMAGE DONE TO OR BY A CAR

EXCESS INSURANCE Co., Ltd.

ASSETS £2,152,660

PEKING:—CALDBECK, MACGREGOR & Co.,

HANKOW:—A. GROSJEAN & Co.,

TIENTSIN:—WHITAMORE & COMMONS.

General Agent:—**C. E. SPARKE**, 44, KIANGSE ROAD, SHANGHAI.

THE
ORIENTAL
MOTOR

A MONTHLY MAGAZINE DEVOTED TO MOTOR INTERESTS IN THE ORIENT

VOL. I

SHANGHAI, FEBRUARY, 1920.

No. 11



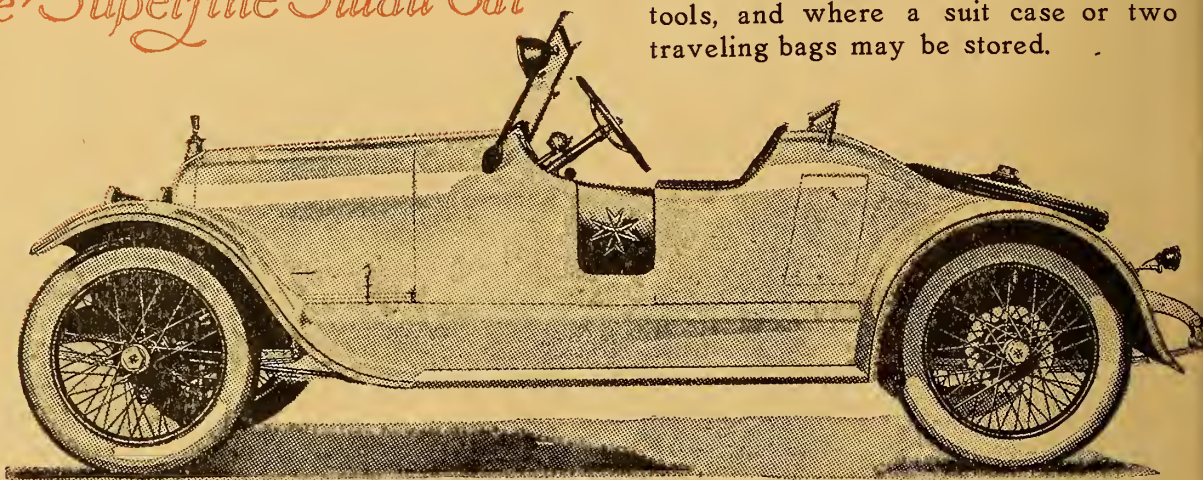
Wing On corner at Tiffin time—Shanghai.

50 CENTS. MEX. THE COPY.

Templar

The Superfine Small Car

*Templar
Top Valve
Motor.*



A FAST, snappy, two passenger car designed for comfortable touring. An aluminium body, upholstered for long drives. A roomy, rainproof baggage compartment carrying demountable top, tools, and where a suit case or two traveling bags may be stored.

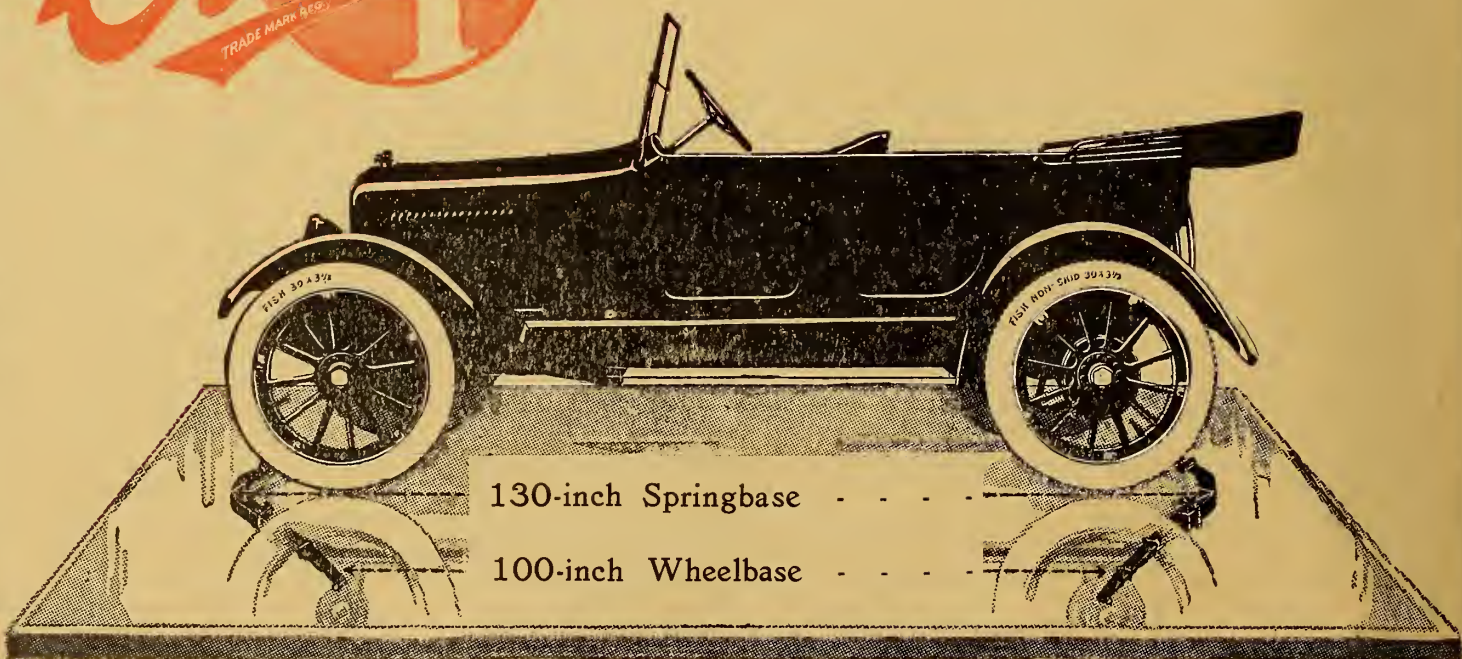
The Templar's success is due to distinctive appearance, wonderful performance and unusual economy of operation.

Equipment most complete and includes six wire wheels and six cord tires, kodak, compass and grade finder.



THE NEW MOTOR CAR

And the Greatest Improvement in Riding Comfort Since the Introduction of Pneumatic Tires.



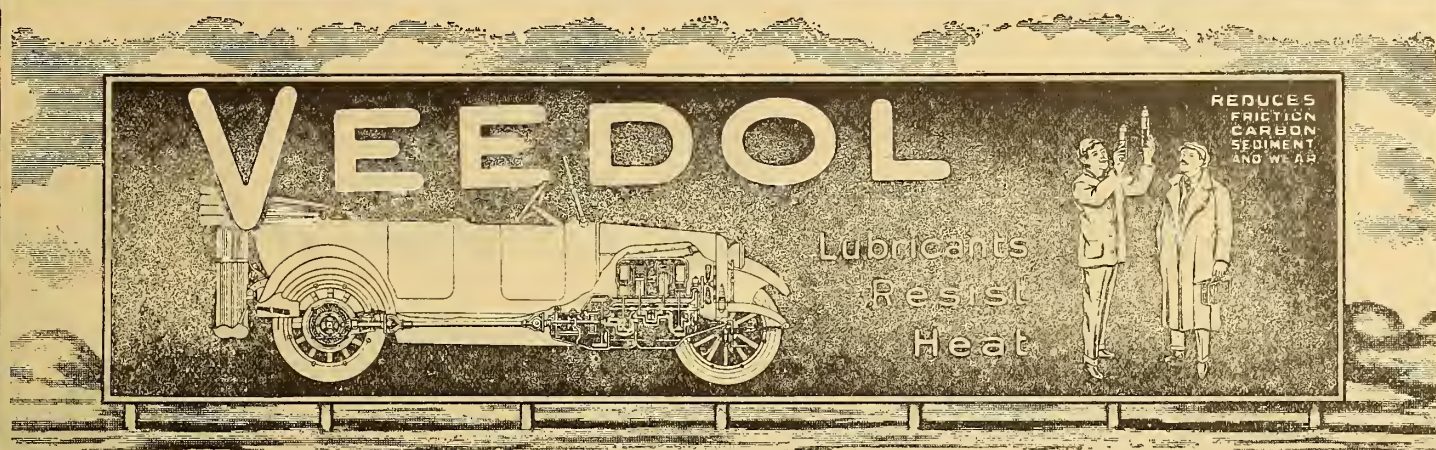
Sole Agents

CENTRAL GARAGE COMPANY

2A JINKEE ROAD.

SHANGHAI.

PHONE C. 3809.



Cold weather engine troubles

Why excess carbon, overheating and burned-out bearings are common in winter

WHAT makes your spark plugs carbonize rapidly in Winter?

What makes your engine overheat—on a run of 25 miles or more—in cold weather more quickly than on a summer day?

Why do bearings burn out more readily in the Winter months?

Spark Plug troubles, overheating and burned bearings are more common in cold weather because cold, raw, gasoline goes into the cylinders as a wet mixture, and fails to explode completely, thus thinning out ordinary oil.

Ordinary oil causes damage

Ordinary oil aggravates these troubles because it loses its body quickly. It breaks down under the heat of the engine in the course of a few day's running and forms large quantities of black sediment.

The balance of the oil is so thinned out that it does not form a durable oil film.

Then, when the engine is started, the cold, raw mixture "cuts" that weakened oil film, and passes down into the crank case.

Thus, the whole oil supply is still further contaminated and thinned down.

With such thin oil in the crank case, even, a few hours of steady running may cause over heating, fouled spark plugs, badly worn or burned bearings and other serious troubles.

The hidden danger of using "thinned out" oil is cumulative. It increases day by day.

Less sediment means durable film and less trouble

Veedol, because of its superior body, maintains a durable oil film between the pistons and the cylinder walls. Neither cold gas mixtures, nor hot vapors can escape from the combustion chamber into the crank case. The gasoline cannot "thin" or "cut" the oil. Thus fouled plugs and valves, overheating and friction are reduced.

Take out the thin oil to-day and test Veedol

VEEDOL Oils:—Zero Light Medium, Heavy and Extra Heavy, Taels 1.72 per gal. can.

VEEDOL Transmission Gear Oil, Taels 1.21 per gal. can.

VEEDOL Greases:—Light, Medium and Heavy Cup—Light, Medium and Heavy Graphite—Gear Compound, Taels .35 per lb. can.

Sole Agents for Shanghai and Yangtze Ports

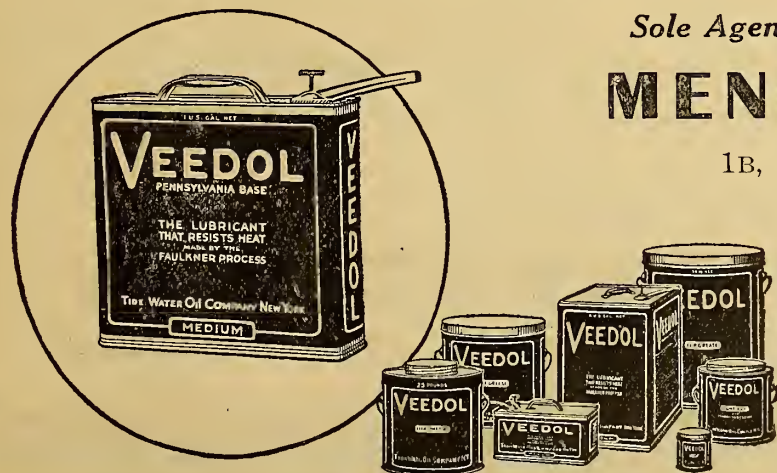
MENCARINI & Co.

1B, KIUKIANG ROAD, SHANGHAI.

RETAIL BY

SQUIRES-BINGHAM Co.

17 Nanking Road, Shanghai.



Firestone

Giant Cords and Demountable Rims

Reasons why—
Over Half
The Truck
Tonnage of
America is
Carried on
Firestone
Tires



Also The Reasons Why~

So Many Cars in China are Firestone equipped
All Sizes now in stock

SOLE AGENTS

CENTRAL GARAGE Co.

2A JINKEE ROAD

SHANGHAI

PHONE: .C 3809

Most Miles per Dollar

THE ORIENTAL MOTOR

Vol. I.

FEBRUARY, 1920.

No. 11.

A Monthly Magazine devoted to Motor Interests in China and the Far East generally.

Registered at the Chinese Post Office as a Newspaper.

CONTENTS.

	PAGE
Aviation To The Forefront in China	5
English Benzol Test Successful	8
New York Show Proves A Winner	9
Survey of Peking-Tientsin Highway	11
A Motor Boat Club for Shanghai	12
The High Cost of Gasoline in China	13
Editorial	14
Rolls-Royce To Have American Factory....	16
Relation of Horse Power to a Horse	18
Notes from Here and There	20
Dunlop Planning Future Extension	22
Now A Sport Model Airplane	24
The Little Things About Your Car	26
One of Shanghai's Fast Growing Garages	28
The Importance of Third Party Insurance	29
Latest Specifications of U. S. Gasoline Pleasure Cars....	30
The Latest British Car Prices	31
A Truck Opportunity for Shanghai	32
New American Cars on Local Market	33
High Record of Automobile Exports Shown for U. S.	34
Motor Truck Meets Emergencies	36
Dupont Four Makes Initial Bow	39
The Era of the Truck ...	40
The Overland 4 A Departure	42
American 1919 Motor Output Reaches Two Billion Value	44
The World's Newest Daredevil Stunt's	46
Oregon State Legislature Boost Gas Prices	49
Chevrolet Wins Gold Medal at Cataluna	50
Excelsiors Made Good with U. S. Army	52
The Evolution of the Motor Cycle	54
New Fiat Can Make 2,500 Mile Flight....	56
Index to Advertisers....	58
When is a Car "Used"	59
Buyers Reference Guide	60

Published Monthly by

THE ORIENTAL MOTOR

FIVE HONGKONG ROAD, SHANGHAI, CHINA.

Subscription, China and Japan, \$5.00 Mexican. Foreign \$6.00 Mexican.
50 cents Mexican per single copy.



SERVICE INDEED!

The following extract from a letter received from the Manager of one of the local garages, offers marked testimony to the splendid wearing qualities of Dunlop Tyres:—

“The hire car drivers give tyres pretty rough
 “usage and for ordinary purposes you can figure $\frac{1}{3}$
 “more mileage than the hire cars get. On ordinary
 “Dunlop Covers the hire cars get about 6000 miles,
 “while **I have just had my first blow-out after**
 “**driving 10,642 miles on the original Dunlop**
 “**Covers which were put on my car.**”

Would it not pay You to fit
 Dunlop now and always?



DUNLOP

RUBBER COMPANY, LIMITED

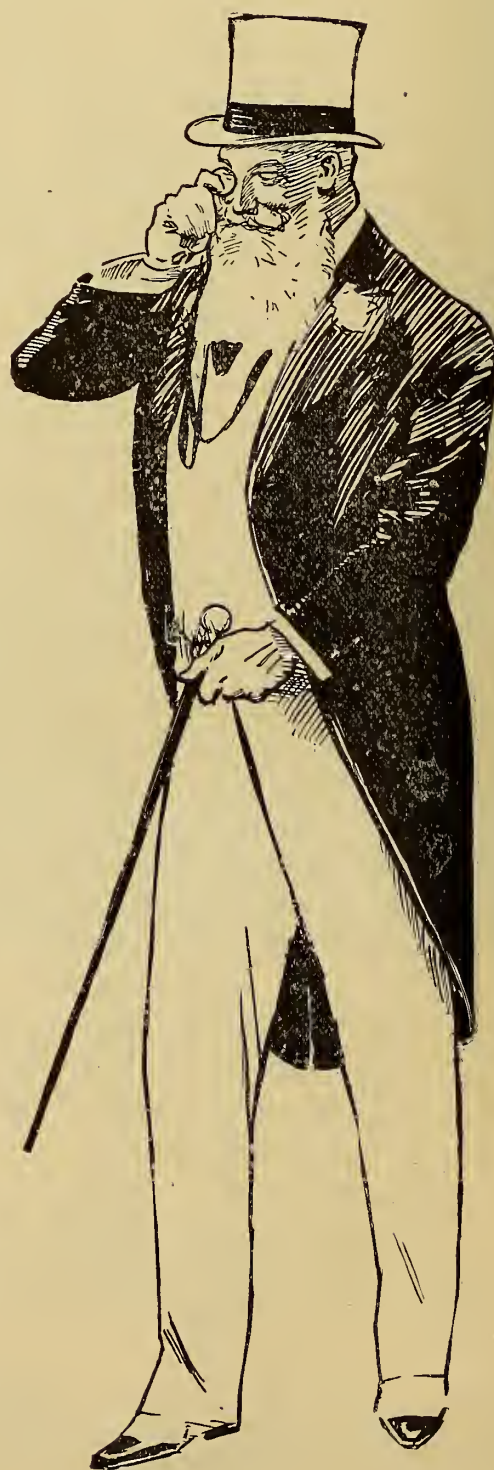
Founders throughout the world of the
 Pneumatic Tyre Industry.

PHONE :

2248. 20 Kiukiang Road, Shanghai.
 2073. Dickinson Hall, Tientsin.
 2270. E. 3, Tong Chang An Chien, Peking.

CABLE :

“Pneumatic”
 ”
 ”



THE ORIENTAL MOTOR

A MONTHLY MAGAZINE DEVOTED TO MOTOR INTERESTS IN CHINA AND THE FAR EAST GENERALLY.

VOL. I.

SHANGHAI, FEBRUARY, 1920.

No. 11.

AVIATION TO THE FOREFRONT IN CHINA.

Formation of the Aero Club of Shanghai Brings a National Response.



Major W. R. McBain, Chairman of the Aviation Board, Aero Club of Shanghai, and his former squadron at Salonica—Major McBain is fifth from the left in the row standing.

THOUGH TRITE and hackneyed, the expression "mighty oaks from little acorns grow," may be well applied to the rapid expansion of the Aero Club of Shanghai, China's first air organization. Not only has the club achieved local recognition but the news of its founding has spread to the nation's capital at Peking, where the organization of a similar body is being urged by the Air Ministry of the government and other larger cities are contemplating similar moves.

Less than two months old, the Club has under way the organization of a technical air board of engineers and experienced aviators, which will be the first body of its kind to be organized in the Far East, having a personnel of men of the "ace" caliber. It will also play a prominent part in the welcoming of the Italian flyers making the

journey from Rome to Tokyo upon their arrival in Shanghai. The important part that it will play in the development of aviation in China has also been recognised by the Chinese Government which has through an official representative offered to the Club the support of the Air Ministry and its co-operation in any moves the association may care to undertake.

The visit of Commodore Beaumont, Major Glidden and Mr. Hillman, members of the commission of the Aero Club of America, to organize the round the world derby, by air, to Shanghai quickened the interest of the residents of the city interested in aviation to form the Aero Club of Shanghai. The first attempt at organization came on January 8 of this year, following a weekly tiffin of the Shanghai Rotary Club at which Commodore Beaumont and

Major Glidden were speakers. Some-one remarked that Shanghai should have an aero club and it was decided then to start the movement for the organization. Only five men were present at the time and under the leadership of Dr. Julian Petit, president of the Rotary Club, these five men, G. L. Treadwell, Dr. Petit, F. R. Sites, Mr. Fresson and L. M. Bocker, formed the nucleus of the present organization and appointed a membership committee.



G. M. Bena, member of the Executive Committee, Aero Club of Shanghai, who was the first civilian resident to fly over the city.

Two meetings were then held at the Carlton Cafe for the purpose of getting together the men interested and following the second meeting a charter membership of one hundred was obtained for the club. At the second meeting, Brodie A. Clarke was elected president, T. E. Doremous and Y. C. Tong, vice presidents, L. M. Bocker, foreign secretary and treasurer, and P. K. Chu, secretary for the Chinese. A significant feature of the two meetings for organization was the intense interest shown by the Chinese citizens of Shanghai who have been prominent in all of the progressive movements, the present membership of the Club being approximately one-half Chinese. At the second meeting, G. M. Bena, a member of the original membership committee, and G. Madier were elected members of the executive committee—the other members being the officers of the club. Major W. R. McBain was appointed chairman of the Committee on a constitution and by-laws.

Following close upon the organization of the Club came the arrival of Lieut. Commander P. S. Chu and Major P. T. Pao, the Chinese government commission to welcome the Italian flyers on their arrival in Shanghai, and both were elected to full membership in the club with the Italian aviation officers stationed in Shanghai and China. Shortly afterward the first steps were taken for the reception of the Italian airmen.

The most important development, however, in the internal affairs of the club is the formation of the aviation board composed of experienced air pilots and technical engineers for the governing of such matters as will arise

from the activities of the club and whose services will be available to the Chinese Government Air Ministry or to any individuals in the Far East interested in the development of aeronautics.

This board is headed by Major W. R. McBain, a squadron commander in the British Royal Air Force who served for four years on the Macedonian, Italian and Palestine fronts, a resident for many years of the International Settlement of Shanghai, and holder of the Military Cross, the Royal Air Force Cross, the Croix de Guerre with palms, the Greek Order of Merit and other decorations for valor and bravery, in action and under fire. The other members are: Capt. R. L. Ward, who during the war was a member of the famous Lafayette Esquadron of the French Army and who holds the Croix de Guerre, Distinguished Service Cross, Medal Militaire, the Belgian Cross, and other honors; Capt. J. E. L. Hunter, holder of the Distinguished Service Medal and the Royal Air Force Cross; Capt. Jean Schisler, holder of the Croix de Guerre; Lieut. Whitescraver; Lieut. L. M. Bocker; F. R. Sites and H. K. Chow. The latter two named are technical engineers, H. K. Chow being a graduate in marine architecture and aeronautical engineering of the Massachusetts Institute of Technology.

The field of operations of this body, as announced, will be working with the Air Ministry of the Chinese Government to obtain a flying field for Shanghai; offering in due time examination of the Federation Aeronautique Internationale, the international association of air clubs of the world, for an international pilots license; making arrangements with the Siccawei Observatory to furnish the meteorological reports



Captain Panfilii and G. M. Bena ready for an air hop.

of the China coast as to winds, storms, etc., in order that this information may be instantly available whenever needed; to render any possible service to the Chinese Government and to visiting pilots; to promote an interest in the technical development of aviation in the Orient; to assist and advise any private or commercial enterprise interested in aviation in the Far East; to assist and encourage the sporting side of aviation in China and elsewhere in the Orient.

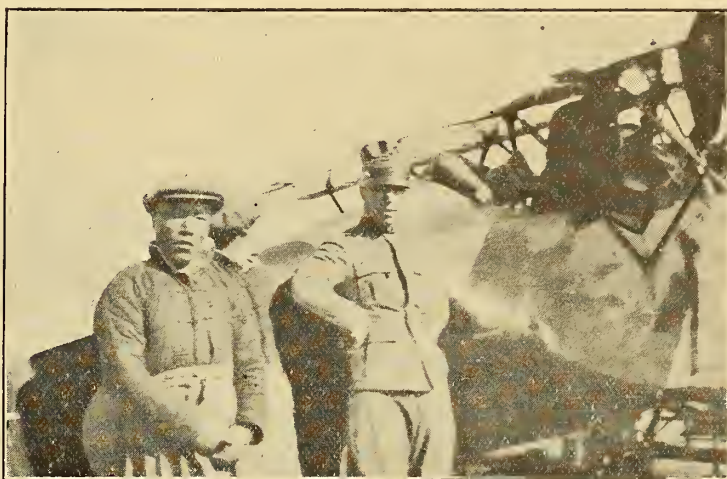
Ambitious as the program may seem, the body to whom its carrying out will fall is undoubtedly capable of handling any and all problems which may present themselves. No more experienced board may be boasted of by any similar organization any place in the world.

The first announced policy of the aviation board will soon come to a realization—that of having a landing field in or near Shanghai. Lieut. Commander Chu, of the Chinese Government Air Ministry, has announced that a landing field will be constructed near Shanghai as soon as the necessary land may be obtained. It is probable that this landing field will be located at Woosung, where a suitable site for both air and seaplanes may be obtained and shops for minor repairs erected. A motor car service for major repairs will be maintained from a larger storehouse and repair shop which will be located in Shanghai. While the field will be a Government one, primarily for the use of an airplane mail service which will be inaugurated between Peking and Shanghai as soon as the field is ready, and for the use of the seaplanes, which are now being constructed in Government work shops in Peking from Chinese design, using Curtiss motors, the landing places will also be thrown open for the use of civilian flyers and the cross-country pilots of any other nation.

The assistance and encouragement offered for the sporting side of aviation in the Orient will be greatly supported by the chairman of the aviation board, Major W. R. McBain, who is now constructing a private landing field on Hungjao Road, near the Hungjao golf course, and has erected a hangar awaiting the arrival of a British fighting plane which he has purchased for his own personal enjoyment. With this start it is highly probable that ether residents of Shanghai will take up flying as a sport, particularly if the proposed Government flying field at Woosung is thrown open to the use of civilians.

The reception of the Italian flyers, in which the Aero Club of Shanghai will co-operate with the other international organizations of the city, will be one of the most significant and interesting spectacles of the year and of many years in the city. The program of the reception is being arranged by a joint committee headed by Lieut. Commander P. S. Chu, G. M. Bena, Major W. R. McBain and others. The flyers are expected to land in the afternoon, coming from Canton where all of the planes will be concentrated upon orders from Captain Del Piano, inspector general

for the flight, in order that they may proceed to Shanghai en masse. Upon the arrival of the planes, a reception of welcome will be given on the field—the Kiangwan race course of the International Recreation Club—admission by ticket, which will be open to all of the citizens of Shanghai. The public welcoming reception will be followed by a tea given by the International Recreation Club at the grounds for the flyers. The night of the arrival a mammoth banquet will be given in their honor at which trophies from Chinese officials and medals from the Aero Club of Shanghai will be presented to the successful pilots. During the second day—the schedule of the flyers allowing them thirty-six hours in Shanghai—other entertainments will be furnished them by Chinese officials, the Italian Chamber of Commerce and the Aero Club.



Captain Panfili beside one of the relief S.V.A. planes, stationed in Shanghai.

Passing from the actual plans and workings of the Aero Club to the response and enthusiasm with which its founding has met, it is a surprising fact that so much heretofore latent interest has been awakened by its formation. The Air Ministry of the Republic of China which because of an apparent lack of enthusiasm has remained silent on its activities has now found the opportunity to voice them and find a vast number of foreign and native residents of the country ready and willing to offer any service or assistance possible.

China, like every other country of the world, has been quick to realize the part that aviation is prepared to play in the future development of transportation and because of the fact that it offers a more fertile field for the development of such a mode of traveling has shown an unusual interest with the past year in aeronautics and its practical application. In Shanghai particularly, since it is a logical relay point for all commercial and competitive aeronautical travel in the Far East, has the realization of this been particularly noticeable. Rumours of the purchase of commercial planes by Shanghai corporations have been current and the entire

上海
汽車
報
鞠躬

新
禧

恭
賀

The Oriental Motor Greetings its Chinese Readers on the Chinese New Year.

community has evinced an intense interest in the development and use of the air courses in China.

The next step in aeronautic organizations in China will undoubtedly be the formation of the Aero Club of China, with the Aero Club of Shanghai and the contemplated Aero Club of Peking as the prime movers in the founding of the body, and the extension of the local associations to Hankow, Tientsin, Peking, and the other larger commercial centers of the nation. Now that the Aero Club of Shanghai has blazed the way, and particularly by the formation of its technical aviation board, the organization of the national body is of the utmost importance. Its program and plans will not be held down by the confining locality of any one city and it can render invaluable service to the Air Ministry of the government and the aviation in the country as a whole by its workings.

It is highly probable that shortly after the arrival and departure of the Italian flyers from China that representatives of the Aero Clubs will either meet at Shanghai or Peking to form the Aero Club of China and with this step China may join the Federation Aeronautique Internationale and take its place among the foremost nations of the world in the development of commercial aviation, military aeronautics, and airplaning as a sport.

As was written in the beginning, trite and hackneyed from long usage as the expression may be, "mighty oaks from little acorns grow."

ENGLISH BENZOL TEST SUCCESSFUL.

Average 23.71 Miles per Gallon for 145 Miles.

The Automobile Association of England in an official report on the 10,000-mile benzole road test carried out on the 16 h.p. Sunbeam offers the following interesting facts.

The average mean weight of the car was 1.8 tons, and the average miles per gallon 24.57. A most surprising result in connection with the lubricating oil was achieved, the average number of miles per gallon working out at 1,739. The lowest fuel consumption recorded was 27.71 m.p.g. over a distance of 145 miles, and it is estimated that the average miles per hour may be taken approximately at 23.46, the car taking 62 days to cover an actual mileage of 10,000 $\frac{3}{4}$ miles. The lubricating oil used was Vacuum A, and in Dr. Harold G. Coleman's report after analysis, it is stated that in none of the samples taken from the sump throughout the run was it possible to detect the presence of any benzole in the oil. Also no free acid could be found in a larger amount than that present in the original oil put into the crank-case. With regard to the carbon deposit on the pistons and valves, this consisted partly of oil, partly of carbonaceous deposit and partly of mineral matter. This last-named consisted partly of road dust drawn in with the air into the cylinders, and partly of oxide of iron or iron itself, due to normal wear.

NEW YORK SHOW PROVES A WINNER.

Offerings Distinctive But Not Radical—Competition on Deliveries not Specifications.

By an American Correspondent.

All thoughts about the saturation of the automobile market may be dismissed for the time being. The automobile market apparently has almost limitless absorptive capacity, while the productive ability of the automobile industry, per contra and by contrast, is limited. Suspected before, this point was convincingly demonstrated by the twentieth annual national automobile show at Grand Central Palace, New York, January 3 to 10.

The net result of the week's activity was to leave an expanded host of prospective buyers and an extended list of unfilled orders. Some of these are to be filled very shortly, some not for a good while. There never was such a show. The management for the National Automobile Chamber of Commerce was modestly reticent concerning the figures, but an observer stationed in the lobby of the Palace at two o'clock Tuesday afternoon checked up the cues at the ticket booths, and estimated a rate—for the rush period, of course—of 1,200 paid admissions an hour. Almost universally the displays were of the practical order—just regular cars, finished in regular colors. Hence the show lacked its sometime giddy coloring and took on a more subdued and practical air. Specially finished show chassis were not as numerous as heretofore, while special show jobs were, with few exceptions, specially painted and equipped stock cars.

Technically little that was radical was offered. The 1920 cars, however, merit attention by reason of increased points of distinctiveness in outward appearance. Mainly these points are attained by clever handling of comparatively minor details. Most lines have been revised only. A few new sporting type four-passenger jobs were on view, however, and these were highly creditable and forward looking. Disc wheels added a flavor of novelty to the show, but were discreetly used. Wire wheels, of course, were abundantly in evidence. Thus, if a maker had three cars on the stand, he demonstrated his lack of bias by mounting one on disc wheels, one on wire wheels and the third on wood wheels.

The new cars that drew special and favorable attention were the Studebaker six, the new Nash four, the Willys-Knight and the Saxon four among others. A new-style Mitchell, with sloping radiator front and rakish lines throughout was at once marked by visitors as a "new note." The Fergus chassis, absent last year, reappeared in six-cylinder form, with its remarkably executed finish and detail. Attaining the distinction of being the highest-priced chassis in the show, this car is generally looked upon as a fore-runner of many new things in design, including particularly automatic lubrication throughout. There are but three

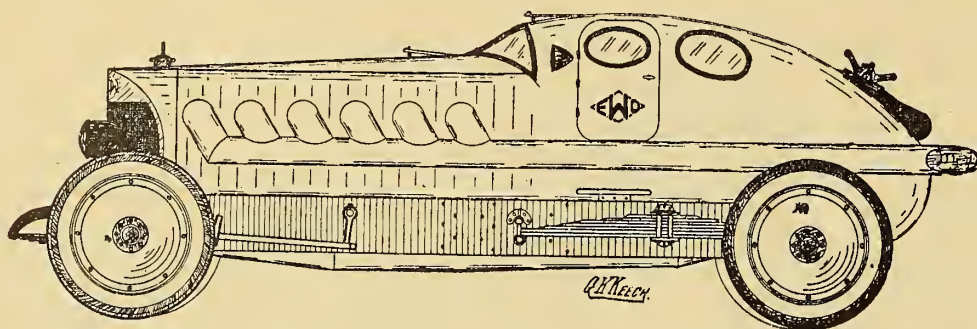
points on the car to be oiled by hand. These require attention only twice a year or so.

That the remote location of the truck show had something to do with its limited attendance was doubtless the case. So, at least, it was thought by many. On the other hand, those that regard the motor truck as a doubtful prospect for exhibition purposes, held to the argument that this was as successful a truck show as ever could be produced. And in many ways it was successful. Manufacturers reported business, and it is unquestionably the fact that many of them, if they took no more orders after the show closed would be fully engaged for months in catching up with those already on their books. Foreign demand, as evidenced plentifully, also wrought encouragement. Not much in the way of new things developed at the truck show, saving the advent of the "high-speed" truck on pneumatic tires, and a number of mechanical developments. A point remarked with favor by buyers of all classes was the tendency to complete equipments. War truck experience was manifest to some degree in new and improved designs, but not as much as might have been expected. For the most part the truck offerings are better than ever, but conservatively so.

A development that may prove to be of consequence to the trade is marked by the advent in numbers of the lighter truck forms. The "high-speed" truck, so-called, is naturally the most conspicuous of these, and is bred of the somewhat dangerous suggestion that a truck of three-quarters to two tons capacity, when tired and sprung for the purpose, can be employed profitably at speeds ranging up to the maximum the laws allow. The more prevalent types of the lighter order, of course, are equipped and geared on more conservative lines, being, for the most part, thoroughly practical-looking types. Indications point to a possible over-running of the market with these lighter types, just as the heavier prevailed a year or two ago. For those concerns that are producing complete lines, embracing all types, the possible effects of such concentration of manufacture may be a matter of indifference. To those which are building the lighter models exclusively, but on a modest scale, on the other hand, the consequences of a marked increase in competition may conceivably develop more seriously.

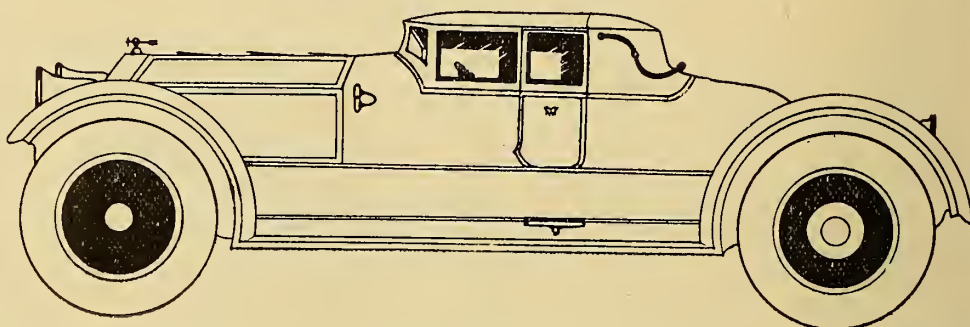
First-hand impressions of the 1920 lines, as revealed by comparative study at the show, indicate that the accustomed annual ear-marks are more numerous in most instances than might have been expected, all things considered. Also that they are, as a rule, highly satisfactory from the general viewpoint of evolution.

WHAT 1921 MAY BRING IN BODIES.



A possible 1921 model as suggested by an American Motorist in a recent U. S. motor journal.

The trend of body designing for future American cars as suggested by a motor enthusiast.



As was generally understood throughout the trade, 1919 was too busy and hurried a year to permit very much to be done by the average automobile builder in the way of developing entirely new models. Besides, at a time when sales managers' portfolios were stuffed with unfilled orders the opportunity to introduce brand-new cars was not considered to be ripe. "Off" years are the years that bring forth new models in abundance. Nineteen-nineteen was not an off year. Nor will this year be an off year, unless the general conception of its possibilities proves to be entirely wrong.

The leading 1920 characteristic is the employment—better yet, the continued employment—of long, sweeping lines. This is a direct evolution from the "bevel-edge" body of 1918, emphasized a little more strongly last year, but now systematically adopted by many makers. The beveled edge itself, however, is not as prominent as heretofore, being replaced by a "Grecian curve," and in other cases supplanted by a curve harmonious with the cross-section of the hood at the dash, by a plain flat rail, or by some other treatment. The effect of continuity from one end of the car to the other, first given popular emphasis by the bevel, however, is the principal distinguishment of 1920.

The new element this year is the almost universal continuance of this line along the hood as far the radiator. This is done by one means or another on practically every new body thus far disclosed. It marks the final stage in the adoption of the unbroken contour effect, as far as most products are concerned. In achieving this point, however, a good deal of ingenuity has been exercised, with the result that not a little variety has been produced.

Along with the impulse to carry out the unbroken line, and thus secure the optical impression that the car has been lengthened and lowered, the designer has been forced to wrestle with one obstacle that has been, in some instances, of considerable magnitude. That is the need for identifying the new car with its predecessors. In other words, where a 1920 car is a continuation of a well-recognized line it is essential that it shall be self-evidently so.

There are many reasons in favor of this course which is practically the universal custom. Thus in addition to working into the new design the year-mark, as it has been termed, the designer must also preserve the trademark of the line. In most cases this trademark is impressed on the public mind by the outline of the radiator.

Most radiators now in use are holdovers, as far as general outline goes, from the days of the rounded contour, which was originally advertised as the "streamline" effect. Radiators being, as a rule either distinctly of the rounded contour type, or harmonious with that method of design, it follows that the designer's problem in going into 1920 lines was to join a definite contour line with a more or less indefinite front elevation. In some instances this was comparatively easy. In the case of the Cadillac, the radiator front is rounded, but the body imposes a marked line, denoting the angle of the hood. This melts away to nothing at the front end. This disappearing line effect, working either from front to back or back to front of the hood, in fact, is a brand-new characteristic. Judging by past developments, it will be succeeded, another year, by a tendency to still more angular and sharply defined radiator fronts.

(Continued Page 38)

SURVEY OF PEKING-TIENTSIN HIGHWAY.

Tentative Route Has Been Selected for North China Motor Highway.

While the actual plans for the building of the proposed motor highway from Tientsin to the capital city of China have not as yet been completed, a tentative route has been selected and surveyed. This highway will probably be the most modern in all of China and should, if constructed properly, be the model for highway development in the nation for a number of years in the future.

In any other country, the building of such a road would not be of any particular note, but in China where it is a matter of pioneering, all of those individuals, Chinese and foreign, who are interested in the development of national highways are watching with intense interest the progress made on this motor road.

The following consists of excerpts from the report of Y. K. Kuo, engineer in charge of the highway survey party, of the route selected during the months of October and November of 1919: The traverse started from the Han Chiao Bridge at the west extremity of Huang Wei Lu, near Governor Tsao's residence. A point on the "P" line of the Commission's survey being selected as our initial point. The line followed practically the old cart road as far as Hao Chia Tsui. After passing Hao Chia Tsui and stuck to the dyke for a short distance, the line left the existing road and was run cross country with a view to saving distance and avoiding the minor crooks and bends which characterized the existing road. Although we aimed at the shortest direct route between the termini, due attention, however, was always called to important towns and villages and the line was kept in touch with them whenever possible. Among these are the following:—

Pei Tsang	at Km. 8
Yang Tsun	„ „ 27
Nan Tsai Tsun	„ „ 39
Ho Hsi Wu	„ „ 56
An Ping Chen	„ „ 67
Ma Tou Chen	„ „ 76
Chang Chia Wan	„ „ 91

The line joins the Peking-Tungchow Highway at Tung-hsien South station of P. M. R. The total distance between Tientsin and Tungchow is 98.208 meters.

The chief reasons of our deviation from the existing road may be summarized as follows:—

- a) Automobile running demands easier curves on modern highways than formerly.
- b) The existing road passes through many towns and villages whose streets are mostly not of sufficient width for motor truck traffic.

c) The existing road surface is generally much lower than the adjacent ground levels, consequently much extra filling would be called for in addition to the amount of filling actually required in forming the "bank."

d) This proposed road will in future be one of the National Highways and should be built to meet all such requirements as recently promulgated by Presidential Mandate.

The line surveyed, however, owing to the lack of sufficient time and outfits for reconnaissance work and the fact that the line was not plotted in the field, is not without its defects. It will be seen from the plan that there are two unnecessary considerable bends throughout the whole line. One lies to the south of Pei Tsang and the other at Ho Hsi Wu. They were not discovered until the line was plotted and it is too late to rectify them. Fortunately they are not too far off from the direct line and the final location could be laid out without any difficulty. The chief characteristics of the existing road are the deep cuts and sharp bends which were frequently met with all the way through, leaving the deep ruts never taken care of. By degrees the road surface became so badly worn out that the traffic was obliged to look for a deviation. But no sooner has the new route been chosen than the same agencies started their destructive process again, and ere long another detour had to be made. Deviation after deviation followed giving rise to the numerous bends on the old road. With the exception of the approaches of the Han Chiao Bridge and the crossing over the P. M. R. branch at the outskirts of Tientsin city where grades of about 3 per cent. or 1 in 33 would be required, the country traversed is fairly flat and no heavy grade will have to be encountered.

There will be a few short turns in going through the town of Yang Tsun, but their radii of curvature will be far above the minimum permissible limit as recommended by the International Road Congress, which is 55 meters. The present Highway Project will necessitate the construction of two bridges and the reconstruction or modification of two others. In addition to the bridges, there will be some minor bridges and culverts needed, the sizes and numbers of which will have to be definitely determined on final location. Assuming the width of Right of Way to be 30 meters the area covered will be 30 x 98,000 or 2,946,000 square meters. As about 10 per cent. of the new route will be on dykes and existing public road, the actual area of land to be expropriated will be roughly 2,651,400 square meters or 4,000 mow.

A MOTOR BOAT CLUB FOR SHANGHAI.

River Cruise Enthusiasts Propose to Have Organization for Encouragement and Furtherance of Sport.

The enjoyment of the motor owner in China—the owner of the motor car—because of the lack of good highways, is confined to the more utilitarian pleasure of driving about the streets of the city in which he is residing or short drives into the country surrounding, but to the owner of a motor boat China opens up a vast network of canals and rivers which provide for explorations and cruises which may continue for years without ever visiting exactly the same spot and viewing the same scenery. No other country in the world beckons with such rich promise of real sport, experience and enjoyment to the owner of the motor driven boat than China. It might well be called the Utopia of the motor boat owner.

Many of the foreign residents of the country have been brought to this realization, which has been the knowledge of Chinese of all classes for years, and have built houseboats on which they cruise for pleasure in the summer and which form comfortable water homes for the holiday and week-end hunting trips during the winter months. Some have even gone further and have small motor driven yachts in which they can make longer cruises in heavier waters.

It is not possible for anyone to live in China for any length of time and not possess a longing for a motor boat with which to cruise about its rivers and canals during their more idle moments. They realize that no better means can be afforded of really learning the interior of the country away from the sea ports and of knowing intimately the life of the Chinese of the "up-country" districts. As a result of this, the motor boat owning population is growing with increasing rapidness and those who are not owners have fallen into the ranks of prospective owners and enthusiasts.

Heretofore no concerted movement for organization upon the part of the owners of motor boats and the enthusiasts of the sport has ever been attempted. Each person in Shanghai who was fortunate enough to possess a house boat and its accompanying motor boat puller, has been limited in his enjoyment and his activities to his family or his circle of friends. For the docking space he has been forced to be satisfied with Soochow or some smaller creek or canal and for overhauling and repairing has found the bank of the stream his only hope as a dry dock.

Now a movement is being started in Shanghai to form the owners of motor boats, yachts, and houseboats and other enthusiasts into a Motor Boat Club of Shanghai which will enable them to enter into a concerted campaign for better dockage and overhauling facilities, for river and canal cruises and regattas, and for exchange of views and information regarding the sport of motor boating. While yet in a purely

embryonic state the organization idea is gaining support rapidly and the passing of another month should see a permanent body perfected and a program announced.

A tentative plan for the work of the organization during the first year or two of its existence has been outlined as follows: The organizing of river trips on holidays and regattas, probably annual races on the river; to have their own docking yards which will provide not only for adequate and safe anchorage but also shops and yards for overhauling, storage and repairing, and later probably a clubhouse on the river or canal.

With the present lack of facilities for the storage and upkeep of motor boats, the need of such an organization as is planned is unquestionable and it should receive the full support of not only those who are at present interested from the standpoint of owners but also those who are prospective purchasers or merely enthusiasts. With yards for storage and repair and the maintenance of shops with expert mechanics and workmen, the expense to the individual owner would be greatly reduced. Again the association with other owners and members of the club would be of vast benefit to all in the exchange of views, in charting river and canal trips in order to give each member the benefit of the experience of the other members and of encouraging the increase of the boating population of the foreign residents of Shanghai.

It is the intention of the persons now planning for the organization of the club to invite the cooperation and views of all persons interested so that steps may be taken toward a permanent organization immediately before the coming of spring, which will be the opportune time for the beginning of the activities of such an association. All persons interested are being asked to communicate with B. F. Brown, manager, Edward Maurer Company, Inc., 7A Kiangse Road, Shanghai.

SEATING CAPACITY OF U.S. AUTO 30,000,000.

The seating capacity of the 6,000,000 automobiles in use in the United States is not less than 30,000,000 persons.

The total seating capacity of railroad cars, of which there are 55,705, is about 3,500,000 people.

To carry the people now carried by automobiles an equal distance would require 60,000 new passenger cars—G.\$11,000 each—at a cost of G.\$660,000,000; 149,972 new locomotives—G.\$35,000 each—at a cost of G.\$524,000,000, and duplication of passenger tracks, depots and employes at an expense impossible to calculate.

THE HIGH COST OF GASOLINE IN CHINA.

Owner's Are Largely Responsible Through Carelessness and Lack of Interest.

The high cost of gasoline in China is, no doubt, caused by the motor car owners themselves, as only approximately 2 per cent take any active interest in their cars. Usually the purchase of supplies is put up to the Chinese chauffeur, who, as a rule, will purchase where he receives the most squeeze. This condition naturally forces the producer to allow sufficient commission to the dealer to cover their overhead expenses and the usual "cumshaw" to the chauffeur. In the U. S. only a small selling commission to the dealers is allowed, usually about 2 cents per gallon, against a larger per cent allowed to the Shanghai dealers, which may be accounted for in part to the chit system and possible loss in accounts.

In regard to the quality of gasoline manufactured in America, it is no doubt true that the demand has increased considerably in the past few years. It is also true that heavier spirits are being manufactured than before, but the production has increased proportionately.

Gasoline can be obtained cheaper in other parts than Shanghai for the reason that competition is encouraged and that better cooperation exists between producer and consumer, and cannot therefore be compared with the Shanghai conditions. It has been proven that, in many instances, the car owner has consulted the Chinese chauffeur and his decision accepted over that of the highly specialized expert, to the detriment of both the producer and consumer. The high price of motor fuel can be directly traced to this condition. It is a well known fact that 50 per cent mixtures of gasoline and kerosene are being, at the present time, used successfully, both in the Philippine Islands and in Shanghai. It has possibly been overlooked that the range of distillation which indicates the volatility of gasoline is the end point, which should only be given consideration. Of two gasolines having the same range of distillation, it has been proven conclusively that the heavier will give a greater mileage and stronger expansion stroke. This is due to the greater heat energy of the heavier fuel. The transformation of this heat energy depends upon many factors, but with the same engine efficiency the gasoline having the greatest number of heat units will naturally produce the greater power.

In the selection of gasolines it must be emphasized that the value is determined only by its range of distillation. The initial boiling point must not be too high as to affect perfect ignition and the end point must be sufficiently low as to completely volatilize in the carbureter.

Motor efficiency depends largely upon carbureter adjustment. In order to produce perfect combustion the proper amount of air must be mixed with the gasoline vapors. Too rich or too poor mixtures will greatly decrease

the power and, in many instances, entirely prevent combustion.

In carburation the correct proportioning of fuel and air and complete vaporization of the fuel is necessary. The heavier gasolines require more air or leaner mixture.

Temperature variation affect greatly the mixture proportions and carbureter adjustments. Carbureters should be set to run normally at temperatures slightly higher than atmosphere temperatures, thereby confining temperature changes entirely to the warming up period.

With ordinary care good mileage and excellent results can be obtained with any grade of gasoline. It is also possible to secure very unsatisfactory results with the highest grade gasoline.

By giving the above facts due consideration, it is obvious that the burden now placed upon the refiner by the unnecessary demand for high gravity gasoline will be eliminated, and competition will be stimulated thereby automatically reducing the price of motor fuel.

B. A. L.

GASOLINE SPECIFICATIONS STANDARDIZED.

As the result of a request of the oil trade that a change be made in the specifications of October, 1918, since they had become unnecessarily stringent and were tending to restrict the total production of motor gasoline, the Committee on the Standardization of Petroleum specifications, Bureau of Mines, U.S.A. has made the following recommendations which became effective November 25, 1919:

- (a) Boiling point must not be higher than 60 degrees C., (140 F.)
- (b) 20 per cent. of the sample must distill below 105 degrees C., (221 F.)
- (c) 50 per cent. must distill below 140 degrees C., (284 F.)
- (d) 90 per cent. must distill below 190 degrees C., (374 F.)
- (e) The end of the dry point of distillation must not be higher than 225 degrees C., (437 F.)
- (f) Not less than 95 per cent. of the liquid will be recovered in the receiver from the distillation.

The development of the motor car and aviation industries in China is being closely traced from month to month by "The Oriental Motor." If you are not a subscriber you should send in one at once to 5 Hongkong Road so that you will not lose a chapter or chapters of this most absorbing advancement. If you are a reader you should share "The Oriental Motor" with your friends. Pass it along with a good word. They will appreciate it.

The Oriental Motor

A Monthly Publication Devoted to Motor Interests in China and the Far East Generally.

PUBLISHED AT FIVE HONGKONG ROAD, SHANGHAI.

London Representative—Mr. C. Cokayne-Naylor, 36-7-8 Southamton St., Strand, W.C.

Subscription rates: Mexican \$3.00 for Six Months or Mexican \$5.00 for One Year in China and Japan, payable in advance; Foreign Countries, Mexican \$6.00 Yearly; Single Copies, Mexican \$0.50 each.

Advertising Rates on application.

NOTICE TO CONTRIBUTORS.

The Editor will be pleased at all times to receive photographs, sketches or articles of character likely to be of interest to readers of this publication. It is understood that contributions will not be paid for unless remuneration has been stipulated and arranged for in advance.

All correspondence should be addressed to the Editor, The Oriental Motor, Five Hongkong Road, Shanghai, China.

American mail should be addressed to The Oriental Motor, United States Postal Agency, Box No. 749, Shanghai.

Registered at the Chinese Post Office as a Newspaper.

Vol. I. SHANGHAI, FEBRUARY, 1920. No. 11.

EDITORIAL.

THE GASOLINE QUESTION.

The eternal question with the motorist seems to be the price of gasoline, since this is the most fundamental necessity after the purchase price has been paid for the car and much speculation as to what prices are, their fairness and what they could be is always rife among the motor owners.

There is always the question "why" prices are as they are in China when prices elsewhere are vastly different.

Based on reports from the various surrounding nations the following are gasoline prices in the Far East:

Shanghai, duty 18 tael cents per American case of 10 gallons, 80 cents Mexican per gallon or approximately 88 cents gold.

Manila, duty free on American gasoline, 1 peso 5 per gallon or approximately 45 cents Mexican.

Japan, subject to high duty, 90 sen per gallon or approximately 40 cents Mexican.

The United States, domestic production, 22½ to 30 cents gold per gallon, according to locality.

Of course, there is always present the question of the grade of gasoline but that question is largely one which can be settled by the motorist himself. The motor manufacturers, particularly those of the United States, have recognized the

resulting lower upkeep on machines by the use of lower grade gasoline and have consequently introduced the hot spot manifold and such other mechanical improvements as will give the motor car owner more miles to the gallon on the lower grades than he was able to obtain on the higher grades of past years. As mentioned in another article appearing elsewhere in this issue of "The Oriental Motor," it is up to the motor owner to use the lower grades of gasoline and thus reduce his own expense of operation and bring lower prices.

Yet it would seem that if gasoline can be sold in Manila, where it is duty free if coming from America, for 45 cents Mexican, that it could be sold in Shanghai by all producers, the nationality of the organization, mattering not, for 50 to 60 cents a gallon with a reasonable profit.

Some day—and it will not in all probabilities be such a long time—there will be a change in the gasoline situation where motorists will use cheaper low grade fuel and the selling companies will bring their prices down to more of a standard for all parts of the Far East.

With even the present control of the local gasoline market, there are some independent firms now selling motor fuel at lower prices. While the quantities for sale by the independent dealers are small yet they cannot help but have a lowering influence on current prices.

AGAIN THE NATIVE CHAUFFEUR.

There are Chinese chauffeurs and Chinese chauffeurs. Some are good but the majority are careless, inattentive and living up to the medieval definition of their name chauffeur—that of brigands and robbers. According to the conscience or lack of conscience of the driver, a motor car owner may get fifteen to twenty miles to the gallon of gasoline or he may get two to five.

Native chauffeurs at best are more of a liability than an asset, although one is forced by custom in this land of "face" more or less to engage the services of one.

A recent case, which should serve as a warning to motor car owners, happened at a local garage where a chauffeur was caught drawing a bucket full of gasoline from the car to which he was attached and making a sale of it to another chauffeur. The transaction occurred at tiffin time when none of the overseers of the garage were expected in, but the chauffeurs had misjudged their time. The chauffeur selling the gasoline was given one month's imprisonment and had his licence cancelled. The second chauffeur was dismissed for the want of evidence against him.

The necessity of a check on the gasoline consumption of any motor car is thus illustrated. A gasoline chit book should be obtained from a reliable garage and used continually. In the case above cited, the owner of the car driven by the second chauffeur had given his driver four dollars with which to buy gasoline. The method by which he was

obtaining it was the cheapest and there was sufficient clear profit in the transaction, "squeeze" to attract them both.

It has also been a source of speculation as to where the smaller garages and gasoline depots get their supply since their monthly purchases from the oil companies are small and it may be that they are acting as "fences" between chauffeurs and obtaining their gas by means such as was being employed in the case at hand.

Much of this arises from the fact that many of the motor owners have no further interest in their car than that of its being a conveyance to the office and back to the home. An automobile is a piece of property—it has passed the luxury stage—and as such it should have all of the attention of its owner. If a motor car is worth owning it is worth knowing something about.

And it is not the motor owner who is looking after the upkeep and maintenance of his machine and daily or weekly checking it oil and gasoline consumption who is complaining about the high cost of upkeep and regretting that he did not buy a car like Jones or Smith, whose car makes more miles to the gallon and costs less to operate.— Jones and Smith probably being real enthusiastic motorists.

HAULING BY TRUCK AND GOOD ROADS.

"Like good roads, motor trucking should interest every man, woman and child," says Harvey S. Firestone, president of the Firestone Tire and Rubber Company of the United States, "Both are basic elements in lowering the cost of distribution, saving products now wasted, opening up resources heretofore untapped. The truck is ready and able to shoulder the burdens the railroads cannot carry. — — — — The truck is the one satisfactory solution to the difficulties of short haul freight."

This was an observation expressed concerning the situation in the United States but it could have been more aptly said had Mr. Firestone made an extensive investigation of the present day conditions of transportation in China and seen the inaccessibility of the farthest distant points of the outports and the lacadaisical methods of string cart and wheelbarrow freighting in the principal ports of the nation.

The commercial future of China will have as two of its largest foundation stones good roads and motor trucks and the two working hand in hand will do much in bringing the nation further toward the development of a real first class industrial world power. The greatest drawback to commerce in the country at the present time is the inaccessibility of some of her richest sections and some of her greatest producing centers. Even with increased mileage of railroads these problems would still be a long way from being solved.

Up in the interior in one section of the nation is a city noted throughout the land for the excellence of its china

works, making dinner sets and all other such articles of such fine artistry and workmanship as to surpass even the noted Dresden variety. But what has happened to the industry? It has been stifled for the want of connection with the outside world. With roads and motor trucks, caravans could bring these products to the port cities to be shipped to all parts of the world bringing more than adequate remuneration to the producer, the transporter and to the buyer.

The first indications of the coming development of good roads and motor trucks are being made prominent by the initiative and far sightedness of various Chinese business men in widely removed sections of the country. In Wuhu an enterprising Chinese is organizing a company to carry on motor truck transportation services of passengers and freight with a capital of \$800,000. In Shantung a similar organization is being perfected. China is moving forward and this with foreign suggestion or supervision.

What a greater progress could be made if the foreign merchants and business men living in China would give this now sporadic development the added impetus of their own example and their own assistance and make it nation wide.

A step in this direction is now being taken in Shanghai by those firms and those garages which are operating motor truck fleets for the hauling of their cargoes. That this step has made an impression upon the Chinese is evident by the increasing number of motor trucks on the streets of the city of Shanghai bearing the names of the leading Chinese firms. This first stone in the now tranquil pool of motor transportation in the nation will bring widening circles of recognition of the worth of the motor truck and will bring it into universal use.

But before motor trucks there must be good roads and every motorist, every business man and every foreign resident in the nation of China should feel duty bound both through their connections with the Republic and for their own interest and welfare to be a good roads missionary. Talking and writing will not build good roads but the continued advocacy of the construction of national highways will bring such a recognition of this necessity as to produce a concerted movement among the people of China and bring the results desired.

The present time is one of the most opportune for such a movement in the history of the nation. The government in Peking has already recognized the necessity of roads and has gone so far as to formulate and publish a standard of width and other specifications for road building. Again, China is being pressed by the other nations of the world to become a united nation and to stand upon her own feet and work out her own salvation. Loans are being made with certain concrete and expressed demands of what shall

(Editorials Continued)

be done with the money advanced and putting in foreign supervision for its expenditure and to check graft.

Why could not a loan be made to China by the business and motor interests of the world for the expressed purpose of building national highways? Union can be reached in no quicker way than by fast and efficient inter-communication between the various parts of the nation and it is here that good roads and motors would prove their invaluable usefulness. Money advanced could be loaned with the understanding that it was to be spent solely in the building of good roads under foreign supervision.

If China is today a land of commercial promise what would China be if she had adequate road communications to all parts of the nation and motor truck caravans rumbling their way along into the remotest parts of the interior carrying with them goods and civilization and bringing back to the ports people and native goods—goods that have probably never found more than a local sale?

A MOTOR BOAT CLUB.

China might aptly be called the paradise of the motor boat enthusiast for even Holland with its canals or Venice with its lagoons cannot offer to the lover of the motor driven boat the fields for peaceful exploration and enjoyment that can be found along the rivers and canals of China. Foreigners in China have been quick to realize this and many of the residents of Shanghai have their motor pulled house-boats which form their week-end homes during the fairer and more favorable weather of the year.

Now comes the proposed plan to organize these lovers of the streams and of the motors into a club which will provide adequate dockage, overhauling space and probably a water side home where exchanges of latest experiences of the members and enthusiasts of "when I was up the river last Saturday" may be exchanged. The idea is a most excellent and worthy one and it is hoped that it will be developed into a large and flourishing organization.

NEW AMERICAN SPECIFICATIONS AND PRICES.

In this issue of "The Oriental Motor" will be found the new specification and prices of 1920 models of American motor cars. These are taken after the recent models exhibited at the New York motor show and are accurate and reliable.

The post wartime revival of motor car manufacturing in the United States has brought many new cars on the market and manufacturers who have heretofore confined their activities to producing accessories and parts are going in for the entire car. Several of these new models are soon to invade Shanghai.

MONTHLY CRUDE RUBBER REPORT.

"The Oriental Motor" To Print Latest News Direct From the United States.

A monthly report on the crude rubber market of the United States will be included in future issues of "The Oriental Motor" which will be received direct from the New York offices of the Edward Maurer Co., Inc., and which can be taken as authentic.

The Edward Maurer Co., Inc., is one of the largest importers of crude rubber in the United States and the president, Edward Maurer, is president of the Rubber Association of New York. The rubber market in that city is governed almost entirely day by day by the quotations issued by this firm.

ROLLS-ROYCE TO HAVE AMERICAN FACTORY.

Company Buys Plant of Wire Wheel Organization at Springfield, Mass.

Purchase of the American Wire Wheel Co. plant at Springfield, Mass., for the location of the Rolls-Royce factory in America, has been announced by John J. McManus, secretary of Rolls-Royce of America, Inc. The plant provides floor space of about 75,000 sq. ft., and when in operation will give employment to approximately 800 hands.

The installation of machinery for the manufacture of the British car at Springfield will begin immediately. While it probably will be several months before actual production will be reached, every effort is being made to hasten the organization of the plant personnel and equipment.

It is planned to use much of the machinery that was operated in the Rolls-Royce airplane engine plant in Cleveland during the war. In addition to this, the company is expected shortly to be in the market for considerable American made machinery.

Thomas Nadin, general superintendent of the Springfield plant, who was installed some time ago with offices at 707 City Realty Building, Springfield, Mass., is authority for the statement that it is proposed to make only one type of chassis, and that a replica of the chassis at the present time built at Derby, England. However, negotiations are now pending with the engineers of the British plant for slight changes to adapt the car to use in America. Important among these is the moving of the control units to the left side of the car to facilitate ease in driving under American traffic rules.

Sixty thousand Republic Trucks are daily doing not only extraordinary things—but positively *heroic* things, in every conceivable kind of hauling. The volume of proof back of the Republic is greater than any other truck in the world is able to present.



REPUBLIC TRUCKS

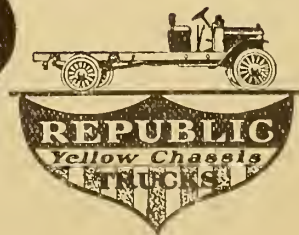
Sole Agents

THE CHINA GARAGE Co.,

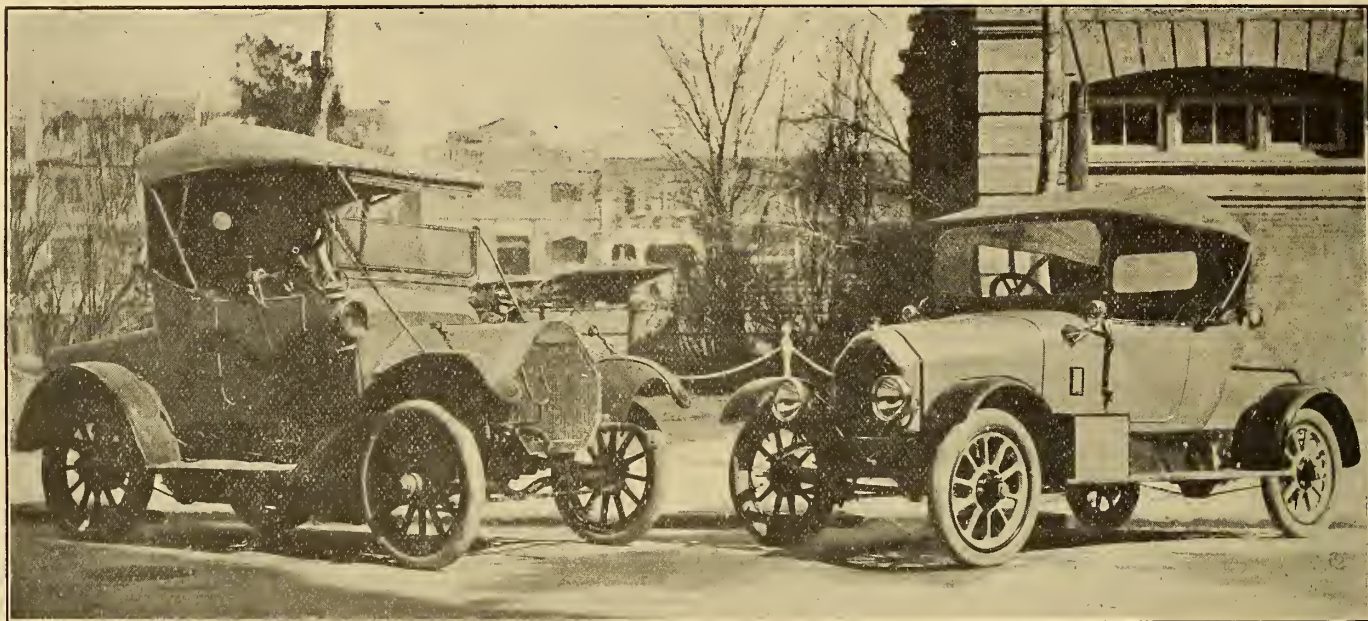
Tel. C. 2403

SHANGHAI

21 Foochow Road.



SHANGHAI'S OLDEST AND NEWEST HUMBERS



On the left is the 1905 Humber—the oldest motor in Shanghai now in actual operation, owned by Dr. Patrick. On the right the 1920 Humber—owned by Mr. Whitehead of Scott, Harding and Co.

RELATION OF HORSE POWER TO A HORSE.

Sale Instinct of James Watt Resulted in Starting the Misnomer.

The relation between the power of a horse and the horsepower of a gasoline engine is not clear to many car owners. Even when it is vaguely understood that there must be some assumed figure which represents the working ability of the animal, such expressions as indicated horsepower, rated horsepower, brake horsepower, etc., only tend to make the term more confusing to the man whose interest in engineering begins with his first car.

To fully understand the meaning of these terms it is well to know the origin of the word horsepower which comes to us from the very earliest days of the steam engine. When James Watt, the English engineer, invented his steam engine over a hundred years ago, he found, as all innovators do, that a vast amount of persuasion was necessary to convert the conservative users of horses to his newly discovered power. It must be remembered that at that time the idea of a practical self-propelled vehicle had not entered the mind of man, and it was for stationary purposes only that Watt designed his engine. In particular he saw a splendid opening for his invention in the pumping and hauling work then performed at mines by horses. The mere statement that his engine would do the work was not sufficient to overcome the barrier of conservatism. So Watt developed what might in these days be called a strong selling point in the form of a direct and easily-grasped comparison with what

horses actually did. To obtain this he conducted experiments with several horses throughout a long period and established that the average horse performed an amount of work equal to the lifting of 33,000 pounds a height of one foot in one minute. He called this one horsepower and it has remained the unit of power measurement for all engines, steam, gasoline or electric ever since.

In the case of the gasoline engine there are broadly speaking two ways of stating the power: 1, the theoretical or horsepower rating which is obtained by mere calculation from bore, stroke, number of cylinders, etc.; and 2, the actual horsepower delivered at the flywheel, called the brake horsepower. In the former all losses which are inseparable from the conversion of the energy stored in the fuel to the rotating crankshaft (and these are considerable) can only be assumed or ignored. And therefore the term is not of much use except for the filling of registration blanks.

Brake horsepower has a more useful meaning. To obtain it the engine must be actually run and the measurement taken while it is in operation; bore, stroke and any other dimensions are of no account whatever. Since the engine at the time of testing is not engaged in useful work, some means must be found of absorbing the energy it is capable of in order to measure it. Hence the testing brake, or dynamometer, which is simply a power absorption device.

The adequate insurance of your Motor Car is of greater importance than the insurance of your House and Furniture. An accident to your Car may not only entail damage to the Car but may involve you in heavy Third Party liabilities.

UNION'S
COMPREHENSIVE
MOTOR CAR POLICY

Covers at a moderate premium

THIRD PARTY LIABILITY WITHOUT LIMIT
And also fully indemnifies the Assured for
ACCIDENTAL DAMAGE

UNION INSURANCE SOCIETY OF CANTON, LTD.

(Incorporated in Hongkong)

ESTABLISHED 1835.

Policies are issued at the Society's

HEAD OFFICE, Queen's Buildings, Hongkong.

And also at the following Branch Offices in China:

SHANGHAI, Union Building, No. 4, The Bund.

HANKOW, Union Buildings, Tungting Road.

TIENTSIN, No. 6 Victoria Road.

NOTES FROM HERE AND THERE.

Ten gallons of gasoline, with the proper air mixture, has an explosive equivalent of 836 pounds of dynamite.

Dr. John C. Ferguson, Commissioner for China for the first Aerial Derby around the world, has appointed Milton O. Clark, of Canton, Assistant Commissioner for China.

John F. Mason, special representative of the New York Lubrication Oil Company of New York, manufacturers of Monogram oils and greases, is in Shanghai on an introductory trip in the Orient.

H. E. Steiner, China representative of the Goodyear Tire and Rubber Company, has returned from an extensive tour of inspection through North China in the interest of his firm.

A Chinese financier at Wuhu is reported as perfecting the organization of a company, with a capitalization of \$800,000, to operate a passenger and cargo motor truck service from Wuhu to Yunchow, Anhwei.

The Chevrolet Motor Car Company in the fall of 1919 achieved the remarkable figure in car production of one thousand a day. There has been only one other car in the world which has ever been produced on this basis.

Owing to the increasing number of motorcycles in the city of Peking, the Chinese police have decided to collect an annual licence on this type of motor. The licence has been fixed at three dollars a month for cycles without side cars.

F. P. Bills has returned to Shanghai to resume his former position with Dodge and Seymour, Ltd., after having been absent from the city since 1917. He accompanied E. H. Dodge, president of Dodge and Seymour, of New York, who is traveling in the Far East on a tour of inspection of the company's branches and interests.

While it had a large majority of the automobile industry's leading figures within its reach at the recent New York automobile show, the Standard Oil Company of New Jersey, says a recent "Auto Topics," improved the opportunity to impress itself upon them. Prices of gasoline were advanced one cent a gallon, reflecting, it is said, the increased cost of crude oil at the wells.

The fleet of five motor boats, manufactured by the marine works of Jardine, Matheson and Company, Shanghai, have successfully completed their river trip to Hankow and have negotiated the rapids above that city with apparent ease, according to reports from that city. The river at this time of the year is hard to navigate and the performance is extraordinary.

W. T. Longwell, export representative of the Maxwell cars, was a recent visitor to Shanghai. The export business of the Maxwell Motor Company is being handled by John D. Williams and Company, New York. Mr. Longwell reports exceedingly good business in India and the Straits Settlement. He is now en route to the States by way of North China and Japan.

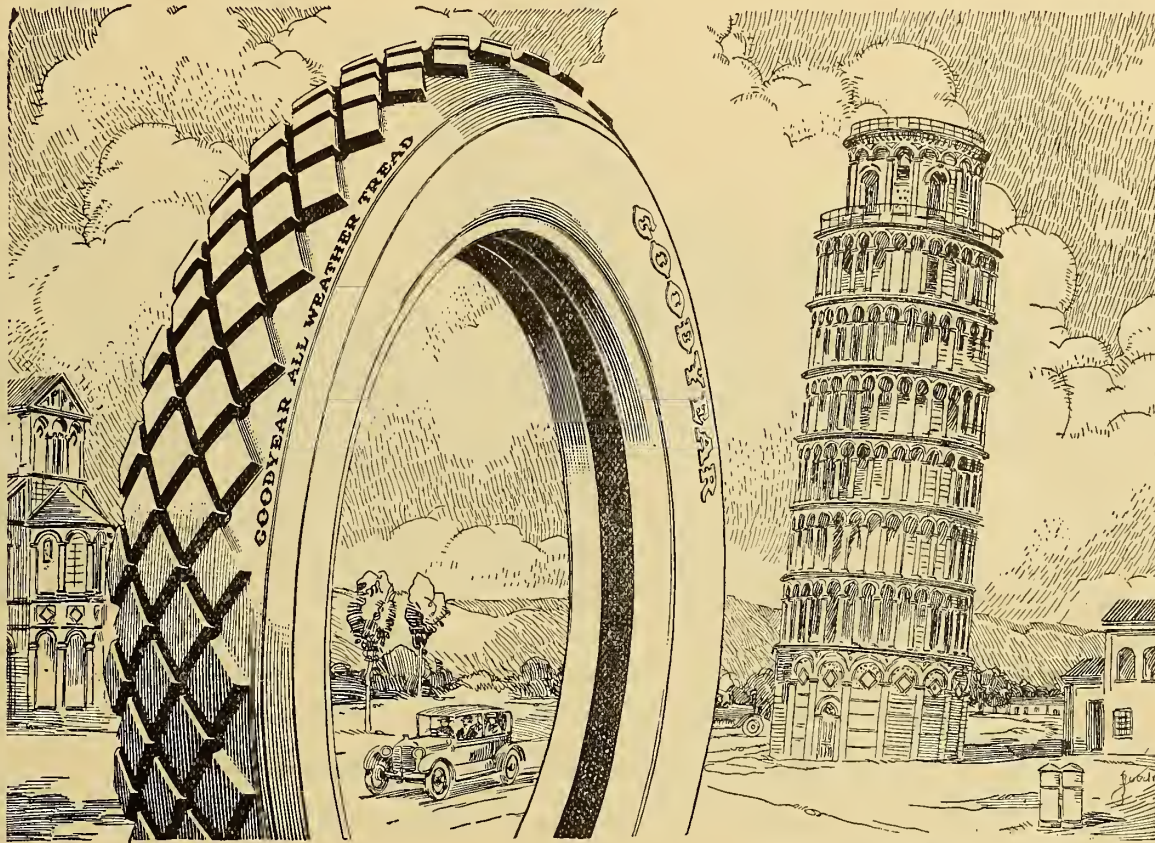
Remarkable figures regarding Spain have been given out recently by a representative of the Cadillac. Spain has some of the finest highways of the world and a national system of good roads, but the cost of gasoline, which was G.\$4 a gallon during the war, has receded only to G.\$1 a gallon for the lowest grade. Although there are twenty million people in the nation, the total motor car population is only 7,000.

The Honigsberg of North China has been organized as an American company for the sale of motor cars, trucks, accessories, machinery and other products under Philippine law at Manila, according to a recent report from that city. The company treasurer will be C.H. French, treasurer of the Pacific Commercial Company. The organization is one of the first to take advantage of the Philippine laws to incorporate for business in another country.

Captain Allesandro Delpiano, chief inspector for China of the Italian Rome-Tokio flight, was the host at a dinner given at the Astor House Hotel on the night of February 12, in honor of Lieut. Com. Chu and Major Pao, official commissioners from the Chinese Air Ministry to welcome the Italian flyers. The dinner was attended by Chinese and foreign officers and officials and by officers and members of the Aero Club of Shanghai.

Lieut. Com. Chu and Major Pao, commissioners to welcome the Italian flyers coming from Rome en route to Tokyo, entertained at dinner for the officers of the Aero Club of Shanghai, the Italian flying officers now in Shanghai and Chinese officials at the Chinese Naval Club on February 5. Lieut. Com. Chu in a talk assured the Aero Club of Shanghai that they would have the unqualified support of the Air Ministry of the Chinese Government in whatever they wished to do.

Mr. A. M. Frame, president of Frame, Leaycraft and Company of New York and London, China representatives for the Commonwealth and Spacke motor cars, and one of the largest American import and export firms, is visiting in Shanghai as a part of a world tour of investigation and inspection. He is accompanied by Mrs. Frame. He will remain in China for several weeks to make an intensive study of the markets and conditions of the country before continuing his journey. The local office of Frame, Leaycraft and Co., which is in charge of Mr. E. P. Gosling, China representative, was opened several weeks ago at 51a Kiangse Road.



La Torre Cppoggrante di Pisa, Italia.

First Principles in Tire-Buying

THERE is only one proper basis on which to buy tires—and only one proper basis on which to manufacture and sell them.

The best tire is the tire that gives the lowest-cost-per-mile.

A tire cannot be judged by its weight, or its size, or its color. Nor does the motorist want to buy these things.

He *does*, however, want to buy *miles of service*. And when he balances miles of service against price, he is buying tires economically.

Tire quality depends on three things,—material, machines, men.

A giant world-wide organisation with unlimited financial resources can command the finest material, invent or buy the most exact and costly machinery, employ the most expert men. Such are the advantages Goodyear holds.

The result is shown in Goodyear sales. Taking the world as a whole, more motorists ride on Goodyear Tires than on any other kind.

Thousands of these motorists have tried many other tires. Their preference for Goodyear is based on experience.

Goodyear Tires are made in both millimeter and inch sizes.

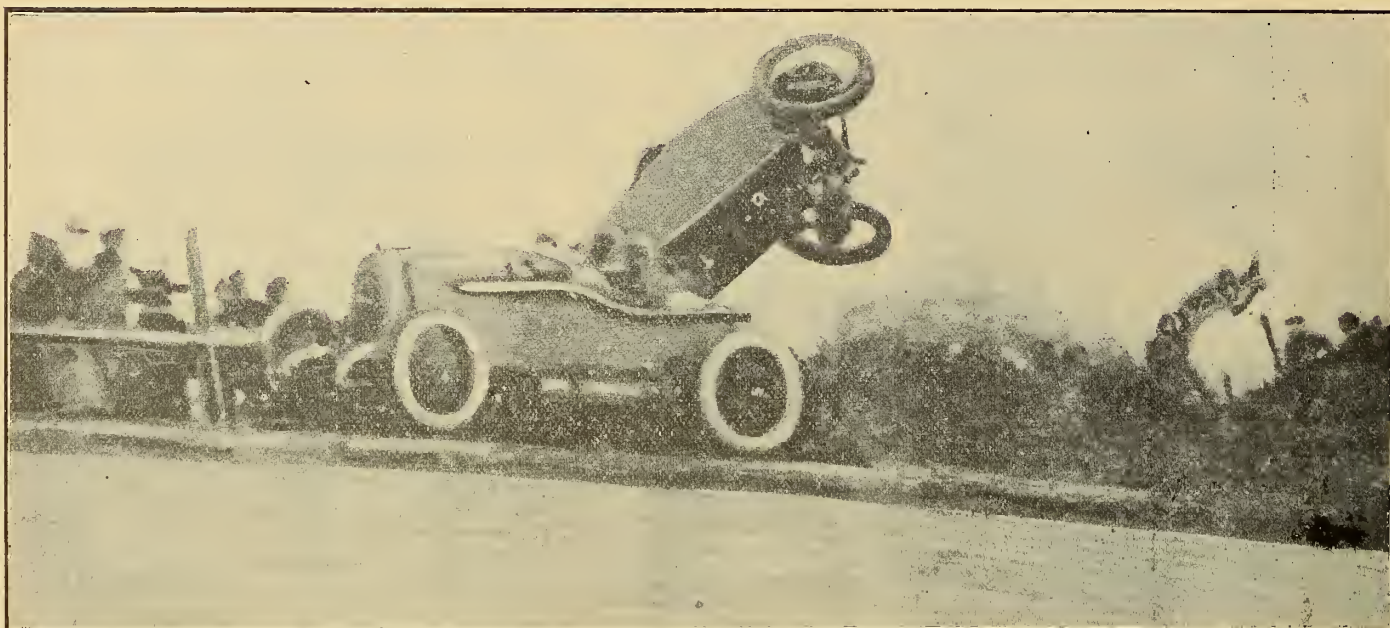
GASTON, WILLIAMS & WIGMORE (F. E. D.), INC.

Wholesale Distributors

GOODYEAR

TIRES

THE FIRST ACCIDENT OF THE NEW ASCOT SPEEDWAY, LOS ANGELES.



A most remarkable and spectacular accident picture of the motor car track, showing Ira Vail's car crashing into a machine driven by Reeves Dutton—both drivers being well known on the American speedways.

DUNLOP PLANNING FUTURE EXPANSION.

Plants in the United States and Europe Will Equip Cars Made There.

That the Dunlop Rubber Company will soon have a plant in full operation in the United States and increased production in Europe so that Dunlop tires will be on the wheels of automobiles of all makes and of all nationalities was the announcement made by the chairman of the company at the annual meeting held recently in England. A greater post-war impetus to production and expansion was also announced both for the company proper and for its subsidiary corporations which furnish the cotton, rubber and raw materials which go into the manufacturing of the famous tires.

In this respect the Dunlop Company is individual. It owns its own rubber estates from which a large portion of the crude material used in the manufacture of the rubber products of the organization comes, its cotton mills and other plants for production of those things which enter into the making of tires and rubber goods. Because of this from the rubber plantation to the tire on the wheel the production and manufacturing is truly Dunlop—Dunlop produced and Dunlop supervised.

The newest announced departure of the company is the location of a plant in the United States which will be an exact duplicate of the Dunlop plant at Fort Dunlop, England. The reason announced for the location of this plant in America is given as the paramount importance of having all American motor cars imported into England and Europe—and this number is increasing rapidly because of the mass production of the manufacturers of the United States—equipped with

Dunlop tires. The opinion expressed by the chairman in his annual report was to the effect that the Dunlop plant in America might soon become the largest plant of the company any place in the world.

In order to carry out the expansion plans, the chairman announced the increase of the ordinary share capital of the company to £2,500,000. In order to further the now existing interest and co-operation of the employees of the organization, they will be permitted to invest in the new shares placed on sale by the increased capitalization.

The French plant of the company is producing at a remarkable rate and the sales are larger than even the more optimistic expected. Other companies on the Continent and elsewhere in the world in which the Dunlop interests have the complete holdings, are located in South America, Holland, South Africa, Belgium, Italy, Copenhagen, Spain, Germany, Canada, and the Far East. A new arrangement between the Canadian company and the Far Eastern plant has been effected which will increase the efficiency of them both and will enable them to seek new fields and give better service.

Exceptional features of the Dunlop tires, which were introduced in the report of the chairman, were pictures of four tires—one having run over 96,000 miles, two over 99,000 miles and one over 106,000 miles.

In closing his report, the chairman stated that the directors present should feel that they had a large appreciation and responsibility in the affairs of a concern in which more than £20,000,000 was involved.



YOU'LL be surprised how little it costs to operate this Chevrolet "Four-Ninety" Touring Car.

Twenty-five miles on a gallon of gasoline is not an unusual record. Tires last an unusually long time. Repairs are few and far between. Care-free, regular performance is the Chevrolet rule.

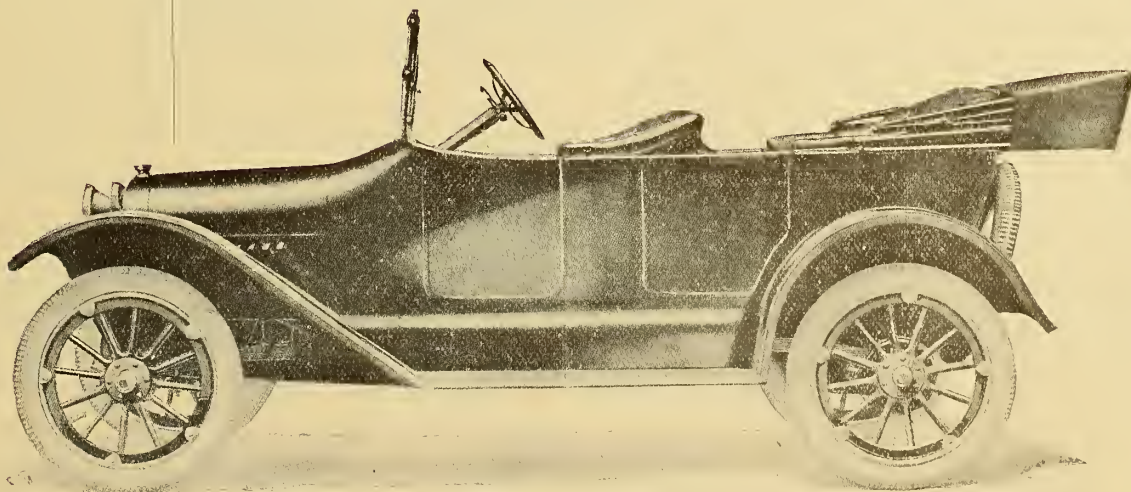
Yet with all its economy and low price, Chevrolet "Four-Ninety" Touring Car is a handsome, roomy, comfortable car—a car you can be proud to own.

H. S. HONIGSBERG & Co., Inc.,

40 BUBBLING WELL

Phone W. 1234

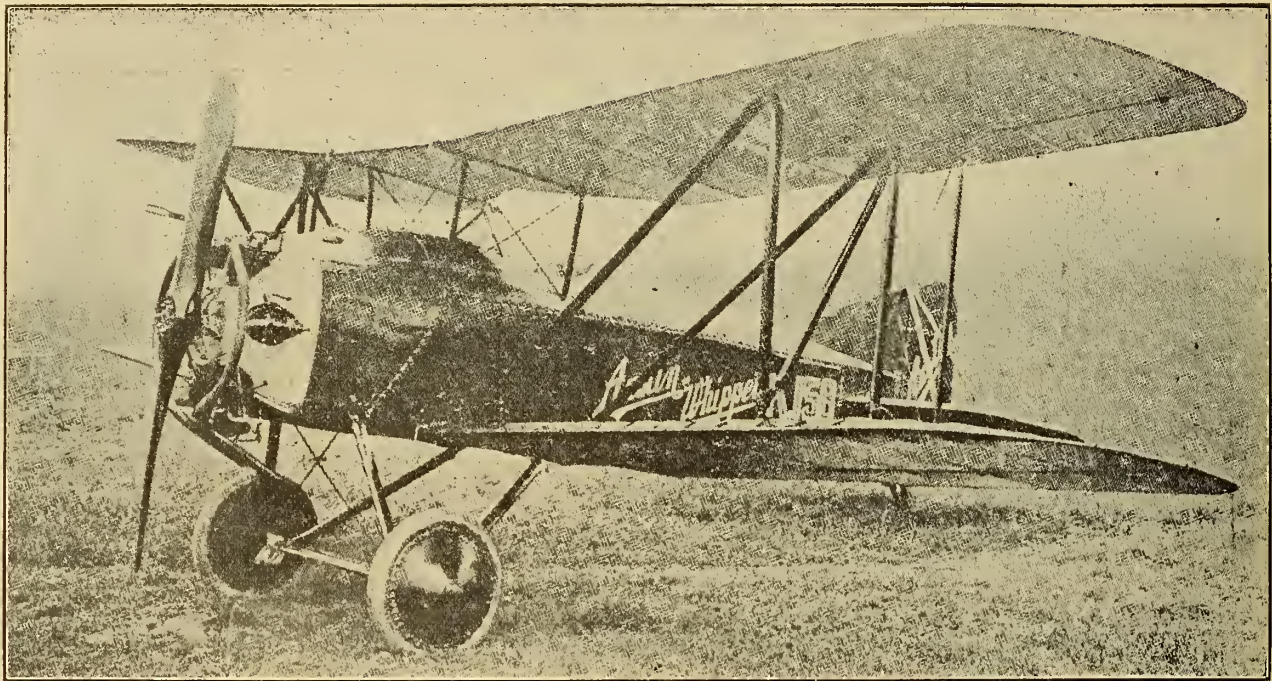
SHANGHAI



Chevrolet "Four-Ninety" Touring Car.

NOW A SPORT MODEL AIRPLANE.

Machine for One-Man Civilian Use Being Made in England.



The New British sport model airplane for civilian flyers—The "Austin Whippet," a private one-man airplane.

The airplane for individual civilian use is now in being, tested and flown, and in process of manufacture for the market, thanks to the enterprise of the Austin Motor Co., Ltd., of Northfield, Birmingham, England, makers of the Austin car and tractor. Though it has not been trumpeted abroad, the airplane-making experience of the company has been extensive, for they made more than 2,000 machines during the war, including the S.E.5, a single-seater fighting scout, which won much favor not only with British but with American airmen. The company made also some 2,500 aero engines. Their new private airplane, known as the "Austin Whippet," is a biplane to carry one person, and can be stored in an ordinary garage. As the machine has demonstrated that it will practically fly itself, the questions of skill in control and provision of storage have been met in a way which brings flying within the reach of the general public. Cost, also, will be reasonable, working out at something like £450, but whatever price is decided upon it will be such as to provide for best material and best workmanship.

The "Austin Whippet" has emerged with the fullest credit from its trial flights, and the distinguished R.A.F. pilot who first took it up was delighted with the ease of its control and the stability of the machine. His experience

led him to declare that he could teach anyone to fly it in ten minutes.

The "Austin Whippet" measures from stem to stern 16ft. and has a wing span of 21½ft. Its fuselage and landing gear are constructed of steel, and instead of wires stream-lined steel tubes take the place of bracing wires, thus doing away with the necessity of frequent re-rigging. In every way, the construction of the machine has been kept simple. A six-cylinder Anzani engine of 45-50 h.p. is fitted, and is giving very good service. The "Whippet" climbs 5,000ft. in 8 minutes and 10,000ft. in 18 minutes. It has a speed of 85 m.p.h., which can be reduced on landing to 30 m.p.h., an attribute which commends it for civilian use.

A very great recommendation is the arrangement for folding the wings, which enables the Whippet to be stored in a building 18ft. long, 9ft. wide, and 8ft. high. One man can easily fold the wings back to the side of the plane after unfastening only four locking bolts, which hold the wings with the greatest security in their position for flight.

The uses of the machine are not restricted to pleasure flights, for in England, and more particularly abroad, there are spheres of business use in which ability to inspect large areas in a short time would be of considerable value.

The TIRE *Supreme*

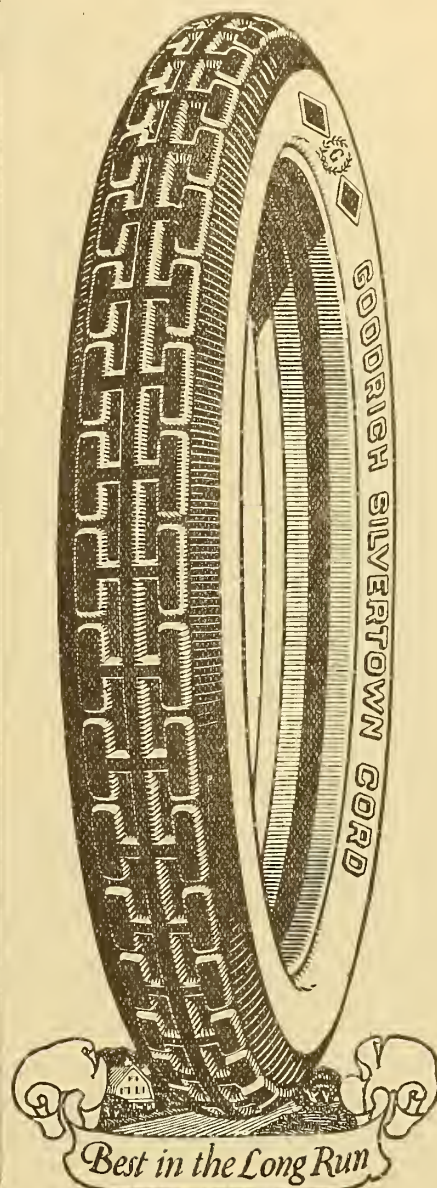
FROM year to year, the greater durability, comfort and economy of Goodrich Silvertown Cord Tires have multiplied their use, and intensified their popularity

Remember the pioneer service of Silvertowns, the original cord tires, raised the cord tire to its place of honor.

Patricians in look, yeomen for work, Silvertowns carry you to the supreme height of satisfaction.

SILVERTOWN

CORD TIRES



Adjustment Basis:
7,000 Miles

FURUKAWA & Co., Ltd.

SOLE AGENTS FOR CHINA

1B Jinkee Road, SHANGHAI. Tel. Central 4932.

PEKING, TIENTSIN, HANKOW, HONGKONG, DAIREN.

THE LITTLE THINGS ABOUT YOUR CAR.

It is the little things about your motor car that count just as it is the little things in your business that often cause your best laid plans to go astray.

Each month on this page will be published little things about your motor car that you should know—often, knowledge that will save you repair bills.

When the bolt fails to take up wear in the square hole in the steering crank thrust a small steel plate in the slot to keep it open and then strike the arm a sharp blow with a hammer just above the hole. This will be found more satisfactory than the use of shims.

An easy way to pull off a wheel that will not be dislodged by the usual methods is as follows: Sometimes the wheel gets "frozen" to the axle shaft, due to being a very tight fit or to other causes, and then the thing to do is to attach a piece of heavy rope to either side of the wheel, leaving enough room to insert a jack between the rope and the end of the spindle. Place the foot of the jack against the rope and the head against the end of the axle and slowly operate the jack to put a pulling force on the wheel through the rope. You can exert a very large force by this method and should be able to remove the tightest wheel.

Do not try to clean the headlight reflectors with an ordinary cloth, because you are apt to scratch the highly sensitive surface and do more harm than good. The best way to polish them is to first sponge them off lightly with a soft wet cloth so as to remove all loose dirt. When dry take a piece of dampened chamois and dip it in jeweller's rouge, and then polish the reflectors with a spiral or circular motion, starting at the center. You will be surprised what a difference clean reflectors will make in the light reflected upon the road.

Most users want a flexible motor and one that can be throttled down well. In many cars it is impossible to throttle down to say four miles an hour without using the brake. When a car is being demonstrated and the demonstrator is showing how it will throttle down, be sure to see that he is not using his brakes to help his engine.

The verdigris that forms on brass may be removed by the following treatment: Mix a good metal polish in equal parts with wood alcohol. Apply with a brush and allow to dry. When dry rub with a clean cloth and the verdigris will come off, too, leaving a clean, smooth surface. After this the brass may be polished in the usual way.

The varnish of a new car is likely to become speckled after its first experience with rain. These tiny spots are not easy to get off, but it is always possible to render them less noticeable by applying a mixture of raw linseed oil and malt vinegar, supplemented by a considerable application of "elbow grease."

In cases of emergency it is possible to attach a cable to the battery by stripping back the insulation for two or three inches, prying apart the strands and then placing a washer on each side of the cable, after which the nut is screwed down, holding the cable firmly in place.

When a car's pick-up is all that can be desired, but it is not possible to get all the speed out of the vehicle that there is reason to expect, it may be accepted as a sign that the choke is too small, preventing the engine from taking a full charge with the throttle wide open.

Linseed oil mixed with a small amount of graphite is recommended as a lubricant for door hinges and latches, which seldom receive attention in this way. Ordinary cylinder oil has a tendency to run, which is not desirable at this location because the clothes of passengers are likely to come in contact with it.

Take out the valve spring, slide the little rubber gasket down toward the spring and invert the gasket, then slip it up in its original place, put the inside back in the valve and tighten. This will stop the leak nine times out of ten. If the rubber gasket seems to be hard it will be of no use to try this, as you will tear the gasket and ruin the valve inside for any future use. Dirt on the rubber washer or on the valve seat will cause a leakage which, though slight, makes it necessary to reinflate tires too often. This dirt makes its way into the valve because a cap is left off.

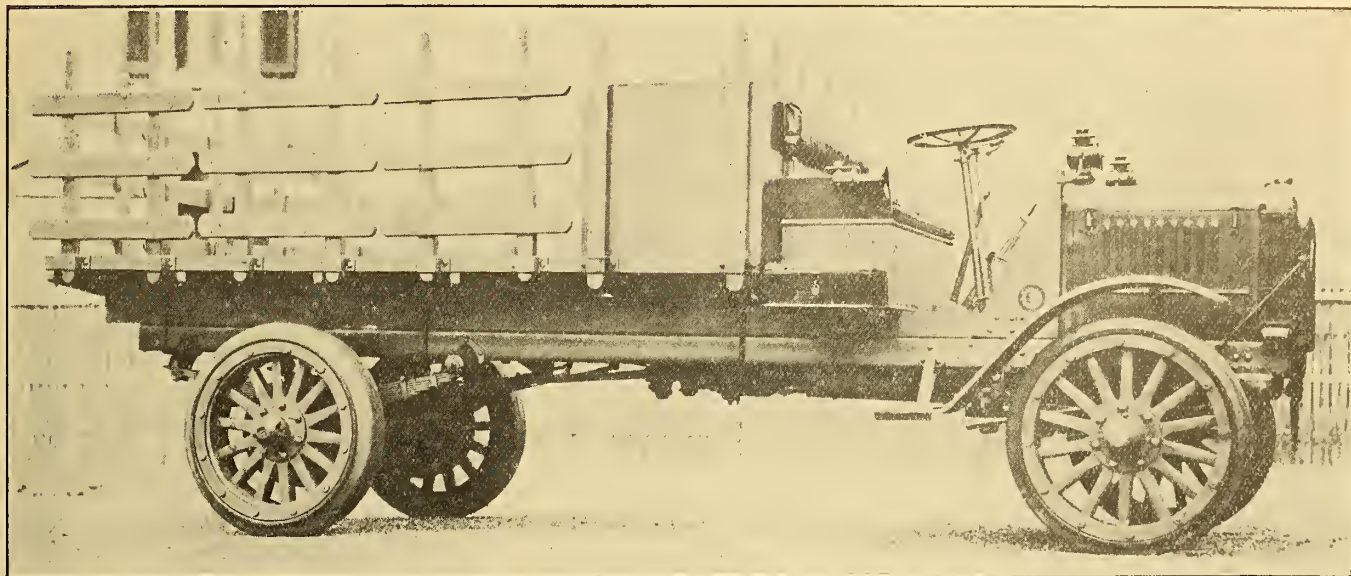
In motors with detachable heads great care must be taken that the gasket used to pack the joint does not project into the combustion chamber. When this occurs the gasket is very likely to become incandescent, causing preignition knocks and even backfiring in the carbureter.

In cars having pressure feed and using exhaust gases to obtain the pressure, it is necessary to keep a careful eye on the feed strainers and other cleaners through which the gas passes on its way to the tank. The dirt accumulations in these strainers are likely to be very heavy.

Clean off carbon with a cloth dipped in gasoline, or a brush may be used. Touch up the points of plugs with emery cloth, but do not touch emery to glazed porcelain, as it scratches and makes it soot up all the more rapidly. A cracked core must be replaced.

AN EXCEPTIONAL

OPPORTUNITY



WE OFFER A NUMBER OF

WICHITA 3-TON TRUCKS

as illustrated above with stake bodies and detachable tires

Will sell singly or as a whole as Desired

MOTOR.—4-cylinder, en bloc, bore $3\frac{3}{4}$ ", stroke $5\frac{1}{4}$ ". Spark plugs $\frac{3}{8}$ "—18 ALAM. Valves enclosed, protected from dirt and dust.

IGNITION.—High tension magneto.

LUBRICATION.—Gear pump and splash oil scoops on end of connecting rods. Capacity of oil base 2 gal.

COOLING.—Centrifugal Pump; $5\frac{1}{2}$ gal. Cellular type radiator. Inlet hose connections $1\frac{1}{4}$ " diameter. Four-blade aluminum fan with ball bearings.

CLUTCH.—Quick Adjustable cone, leather faced, spring inserts. Dimensions, $15 \times 2\frac{1}{2}$ ".

TRANSMISSION.—Selective sliding gear, 3 speeds forward, 1 reverse. Face of gears, 1". Reduction through transmission: 1st speed, 3.65 to 1; 2nd speed, 1.69 to 1; 3rd speed, direct drive. Reverse speed, 4.78 to 1.

DRIVE.—Propeller shaft to transmission; tubular propeller shaft transmission to worm drive rear axle.

SPRING.—Heat treated. Front, semi-elliptic, 9 leaves, length 40", width $2\frac{1}{4}$ ", suspended under frame. Rear, semi-elliptic, 14 leaves, length 56", width 3", outside bracket suspension.

BRAKES.—Service, internal expanding on rear wheel drum. Diameter, $18 \times 2\frac{1}{4}$ ". Emergency, internal expanding on rear wheel drum, $18 \times 2\frac{1}{4}$ ".

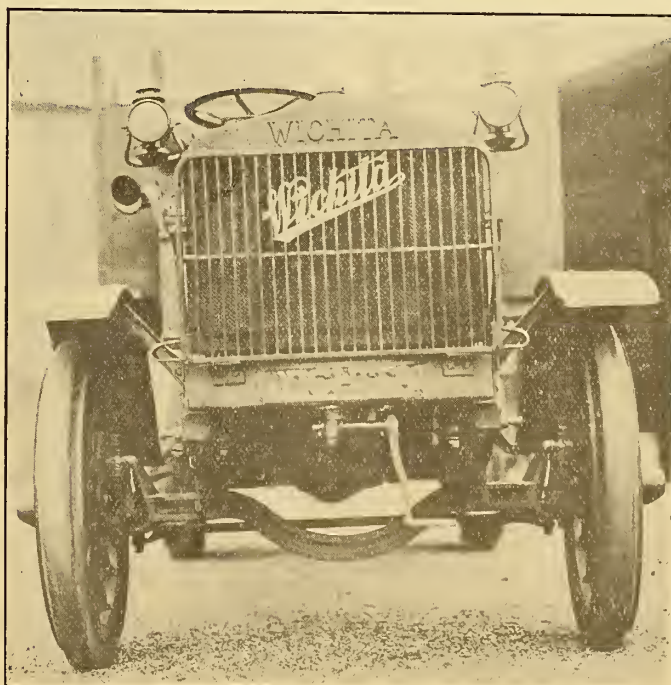
WHEELS.—Artillery type, front and rear, 36" diameter, 14 spokes. Front wheel spokes, $2\frac{1}{4}$ ".

TIRES.—Front, solid, single, 37×4 ". Rear, solid, 37×7 ".

EQUIPMENT.—Two oil side lights, one oil tail light, horn, tool kit, and jack.

Complete stock of spare parts including tires

PRICE ACCORDING TO QUANTITY



For further particulars apply to

O. E. BRINGEWATT

47 BOONE ROAD, SHANGHAI.

ONE OF SHANGHAI'S FAST GROWING GARAGES.

Auto Castle, Founded in 1914, Spreading Out for Increased Sales and Service.



The Home of the Auto Castle at 228 Avenue Joffre Shanghai.

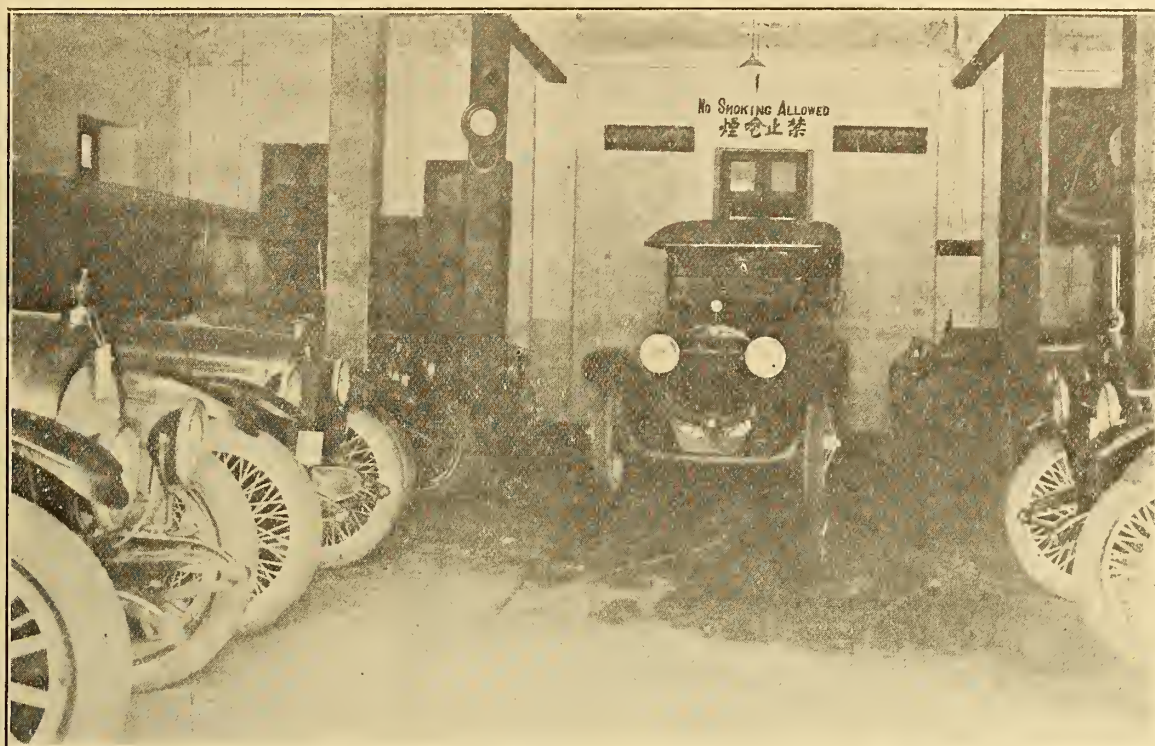
One of Shanghai's younger members of the garage family which is fast growing in its sales, service and storage business is the Auto Castle, which is located at 228 Avenue Joffre, in the French Concession. Although it has only been in operation for a comparatively short time its progress has been steady and lusty.

In 1909 the founder of the Auto Castle, Mr. J. Heimendinger, came to Shanghai for Sennett Freres after having been associated for a number of years with the leading motor manufacturers in Europe. In 1914, Mr. Heimendinger seeing the opportunity offered by the fast and ever growing motor population of Shanghai and China resigned his position and organized the Auto Castle force of mechanics and automobile men.

From the time of its founding up until August 1919, the Auto Castle was under the sole and personal supervision



*J. Heimendinger,
founder
of the
Auto Castle.*



Showing a portion of the sales and storage floor of the Auto Castle.

of Mr. Heimendinger but at that time his two brothers joined forces with him, Sylvain Heimendinger coming in as supervising engineer and A. Heimendinger as service manager.

The Auto Castle is the sole distributors for the widely known Haynes car and also handle other new as well as used cars. They are now arranging for other agencies for

French, British and American cars, announcement of which will be made later. They also handle and stock several lines of trucks in various ton capacities.

The company maintains both a storage and a service department which they expect soon to enlarge in order to meet the increased demands which are steadily growing.

THE IMPORTANCE OF THIRD PARTY INSURANCE.

Owners of Motors Should be Protected Against Claims for Damages and Injuries.

"A skidding Army lorry ran into a crowd of people on the pavement in Rye Lane, Peckham, yesterday afternoon, killing one woman and injuring three persons.

"The steering gear of the lorry, a heavy steam-driven vehicle, seems to have gone wrong. It swerved to the pavement, and the four persons named formed a little group directly in its path."—"London Daily Chronicle."

The above clipping illustrates better than any words of ours the importance of third-party insurance. At the outset I wish it to be fully understood that I express no opinion as to the legal aspect of the above case. The important point to which I wish to draw the attention of readers of "The Oriental Motor" is the rule that always operates in such a case as the foregoing. The rule is as follows:—"Each accident shall be held to include a series of accidents occurring in connection with or arising out of one event."

Now, this rule means that the insurance company in dealing with claims in respect of an accident similar to the

foregoing would treat the matter as being one accident at least so far as the assured is concerned. Where the policy grants unlimited cover the holder of such has nothing to worry over; it is the policyholders whose policies limit the amount payable in respect of any one accident that it effects. Of course, it must be understood that negligence must be proved before a claim can be sustained and the onus of this is on the claimant. Still, this will not prevent claims being made, and the assured, or rather his insurance company, will be called upon either to settle or rebut such claims. If the defendant wins it is generally to find himself saddled with a heavy bill of costs, whilst should there be a doubt the plaintiff invariably secures the benefit of it and to a right merry tune, too, for motorists are apt to be looked upon as royal game to be bled. The moral of the whole thing is to secure unlimited cover with a first-class office and there can then be no question but that the total liability he incurs will be the premium paid. It is quite an easy matter for an accident such as the foregoing to happen, therefore if readers are wise they will take timely warning. W.T.P.

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan	Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan	
OLYMPIAN											SAXON											
	4-3½x4½	Conn	A-Lite	116	32x3½	...	1240	1240	.....	.....		6-2½x4½	Remy	Wagner	112	32x3½	SS	†1295	1295	.....	.....
OVERLAND											SAYERS											
4	4-3½x4	A-Lite	A-Lite	100	30x3½	QD	845	845	1495		SIX-42	6-3½x4½	Delco	Delco	118	33x4	\$1745	\$2695
OWEN-MAGNETIC											SCRIPPS-BOOTH											
W-42	6-4	x5½	Bosch	Own	142	35x5	SS	\$6500 \$7500		Six-39	6-2½x4½	Remy	Remy	115	32x4	SS	1425	2175
PACKARD											SENECA											
3-35												4-3½x4½	Remy	Remy	108	30x3½	C	.....	990	.....	.....
3-25	12-3	x5	Delco	Bijur	{136	35x5	SS	.....	.....	{5550	SINGER										
					128	35x5	SS	†5200	\$5200	{5250	20											
PAIGE											6-4											
6-39	6-3½x5½	A.Kent	G&D	119	33x4	SS	†1670	1670	.....	2395	SPACKE										
6-55	6-3½x5½	A.Kent	G&D	127	33x4½	SS	.....	†2300	2195	3095	S-20										
PATERSON											2-3½x3.67A.Kent											
6-47	6-3½x4½	Willard	Delco	120	33x4	SS	.....	1695	1725	2600	STANDARD										
PEERLESS											I											
56	8-3½x5	A.Kent	A-Lite	125	34x4½	SS	.....	†2900	2900	3700	8-3½x5										
PIERCE-ARROW											A.Kent											
48	6-4½x5½	Delco	Wsths	142	35x5	QD	7650	7650	7750	9250	Wsths											
38	6-4x5½	Delco	Wsths	134	34x4½	SS	†7250	7250	7250	8550	2-4x5											
PILOT											.....										
6-45	6-3½x5	Delco	Delco	120	32x4	SS	†1700	1650	.....	2450	130										
PORTER											34x4½											
	4-4x6½	Berling	.....	142	35x5	SS	.....	†9200	9400	.....	SS										
PREMIER											.....										
6-D	6-3½x5½	Delco	Delco	126	32x4½	SS	4300	†4300	4300	.....	34x4½										
R & V-KNIGHT											SS											
J	4-3½x5	Wagner	Wagner	115	32x4	QD	.....	2150	.....	2700	†2350										
R	6-3½x4½	Wagner	Wagner	127	32x4½	QD	3050	†3050	3050	3800	2350											
REO											2575											
1920	6-3½ ⁹ / ₁₆ x5	N. E.	N. E.	120	33x4	SS	†1650	1650	.....	2400	3450										
REVERE											4950											
A	4-4½x6	Bosch	Wsths	131	32x4½	SS	3850	3850	†3850	.....	2575										
ROAMER											2685											
C-6-54	6-3½x5½	Bosch	Bijur	128	32x4	SS	2875	†2950	2950	3850	2685											
ROCK FALLS											2135											
	6-3½x5½	Bosch	Wsths	136	35x5	SS	.....	.....	.....	.....	2135										
											2135											

ABBREVIATIONS.—“A.Kent” Atwater Kent, “A-Lite” Auto-Lite, “Conn” Connecticut, “G & D” Gray & Davis, “Eisman” Eisemann, “L-N” Leece-Neville, “N.E.” North East, “Wsths” Westinghouse, “W. Lnr.” Ward Leonard, “SS” Straight Side, “QD” Quick Detachable, “C” Clincher “QDR” Quick Detachable Reversible. NOTE.—30x3½r means that the rear tires are 30x3½ and the front are smaller. 31x4 C tires on Sedan.

THE LATEST BRITISH CAR PRICES.

The following is a revised price list for 1920 of British motor cars available at the time of our February number. It now includes a list of all the principal British makes, and is as nearly complete as possible with the information at hand.

A. C.	6-cyl. Chassis only...	£550	BRITON STANDARD MODEL.	4-cyl. 11.3 h.p.	Two-seater ...	£450
ANGUS-SANDERSON.	4-cyl. 14.3 h.p. Two-seater ...	575			Four-seater ...	475
	Four- „ ...	575	CALCOTT.	11.9 h.p. Two-seater ...	...	£475
	Two- „ Coupé ...	750		11.9 h.p. Coupé ...	...	550
ARMSTRONG-SIDDELEY.	“SIX.” Chassis only ...	£720	CALTHORPE.	4-cyl. 10.5 h.p. Two-seater Standard	375	guineas
	Saloon Double Phaeton ...	1,000		Four-seater Standard ...	...	400 guineas
ARROL-JOHNSTON.	4-cyl. “Victory Model,”			Coupé ...	...	450 guineas
	Complete ...	£700		Four-seater Sporting ...	...	400 guineas
	4-cyl. 15.9 h.p. Complete ...	625	CHARRON.	Chassis only ...	...	£960
AUSTIN.	4-cyl. 20 h.p. Chassis Complete ...	£470	CHARRON-LAYCOCK.	Two-seater ...	...	460 guineas
	4-cyl. 20 h.p. Standard Model ...	595		Three-seater ...	...	490 guineas
	4-cyl. 20 h.p. Four-seater Coupé ...	695		Coupé ...	...	540 guineas
	4-cyl. 20 h.p. Seven-seater Landaulet ...	725	CROSSLEY.	4-cyl. 25-30 h.p. R.F.C. Chassis...	...	£950
AUTOCRAT.	Two-seater ...	£445		Touring ...	...	1,200
	Four-seater ...	475		Limousine Landaulet ...	...	1,400
	Coupé ...	500		Coupé ...	...	1,400
BEAN.	4-cyl. 11.9 h.p. Two-seater, Open	£425	DAIMLER.	“Light 30” Chassis ...	...	£1,000
	Four-seater, „ ...	450		“Standard 30” Chassis ...	...	1,060
	Two-seater, Coupé ...	500		“Special 45” ...	...	1,300
	Four-seater, „ ...	550	TALBOT-DARRACQ.	16 h.p. 4-cyl. Four-seater model	£750	
BELSIZE.	4-cyl. 20.1 h.p. Chassis only ...	£450	TALBOT-DARRACQ.	8-cyl. 20 h.p. Chassis ...	...	£950
	Two-seater Model ...	550	DAWSON.	4-cyl. 11 h.p. Two-seater ...	...	£475
	Four- „ „ ...	620		Coupé ...	...	600
	Coupé ...	770	DELAHAYE.	4-cyl. 14-18 h.p. Chassis only ...	...	£1,050
	Landaulet ...	830		6-cyl. 18-22 h.p. „ ...	...	£1,500
BRITON LIGHT CAR.	4-cyl. 9.9 h.p. Two-seater		DEEMSTER.	4-cyl. 10 h.p. Two-seater ...	385	guineas
	Model ...	£395		Coupé ...	400	„
				Four-seater ...	440	„
			DOUGLAS.	2-cyl. 10.5 h.p. Chassis only ...	...	£350
				Standard Body complete ...	...	400
			D. F. P.	12.1 h.p. Chassis only ...	...	£675
			ENFIELD-ALLDAY.	5-cyl. 10 p.h. Two-seater ...	...	£350
				„ „ Four-seater ...	...	350

ENSIGN. 6-cyl. 38.4 h.p. Chassis only	£1,700	ROVER. 12 h.p. Two-seater model	£700
ERIC CAMPBELL. 10 h.p. Two-seater	£395	Four-seater "	750
GLADIATOR. 4-cyl. 12-14 h.p. Four-seater Model	£785	Limousine Coupé	800
Coupé	900	ROVER LIGHT CAR. 8 h.p. Two-seater	£230
4-cyl. 25-35 h.p. Coupé Saloon	1,200	RUSTON-HORNSBY. Five-seater	£600
G. W. K. 4-cyl. Two-seater	£275	S. C. A. T. 4-cyl. 15 h.p. Chassis	600
Four-seater	275	SINGER. Two-seater Model	£400
GUY. 8-cyl. 20 h.p.	000	Two-seater Sporting	400
H. E. CAR. 4-cyl. 13.9 h.p. Chassis only	£550	Coupé	500
Complete, Four-seater	£700	SIZAIRE-BERWICK. 4-cyl. Four-seater	£1,650
HAMMOND. 4-cyl. 11-22 h.p. Two-seater	£585	STAFFORD. 4-cyl. Four-seater	£405
HAMPTON. 4-cyl. 9.4 h.p. Chassis only	£360	STANDARD. 9.5 h.p. Chassis only	£385
Two-seater Model	425	Two-seater	425
Four-seater "	465	Coupé	525
Coupé Model	500	STAR. 20.1 h.p. Four-seater, saloon top	£885
HILLMAN. 4-cyl. Two-seater Model	£435	15.9 h.p. Two-seater	670
Four-seater Model	495	Five-seater	690
Coupé	505	STOREY. 14.3 h.p. Chassis only	£525
HORSTMANN. Two-seater Complete	£350	" Two/Four-seater	600
Four-seater "	385	" Coupé	700
Coupé "	410	SUNBEAM. 16 h.p. 4-cyl. Chassis	£850
HUMBER. 4-cyl. 10 h.p. Two-seater Complete	£480	Touring Car	1,125
4-cyl. 10 h.p. Four-seater	530	Limousine	1,275
4-cyl. 10 h.p. Coupé	£575	24 h.p. 6-cyl. Chassis	1,125
4-cyl. 15.9 h.p. Five-seater	750	Touring	1,400
4-cyl. 15.9 h.p. Saloon	£1,010	Limousine	1,650
LANCHESTER. 40 h.p. Chassis	£1,500	TALBOT. 4-cyl. 25 h.p. Chassis only	£950
MARLBOROUGH. Two-seater	£550	4-cyl. 25 h.p. Five-seater	1,230
MASCOTTE. Three-seater Model	£450	6-cyl. 30 h.p. Chassis only	1,050
Two-seater, Polished aluminium body	575	THOR. 4-cyl. 15.5 h.p. Two-seater	£400
Coupé	675	" " Coupé	450
METEORITE. Chassis Complete	£375	UNIC. 4-cyl. 13-24 h.p. Chassis only	£970
Two-seater model	450	VARLEY-WOODS. Two-seater Model	£540
Four-seater	575	Four-seater Model	660
MORRIS-COWLEY. Two-seater	£315	Coupé	760
MORRIS-OXFORD. 4-cyl. Two-seater Complete	£380	VAUXHALL. 25 h.p. Chassis only	£950
Four-seater	415	30 h.p. Chassis only	1,125
Coupé	475	VULCAN. 16 h.p. Four-seater Model	£675
NAPIER. 6-cyl. 40-50 h.p. Chassis only	£1,750	12 h.p. Light Car, Two-seater	500
Landaulet	2,450	Four-seater	525
Sporting Torpedo	2,240	WAVERLY. 4-cyl. Chassis only	£450
Cabriolet	2,340	14 h.p. Five-seater Model	575
PALLADIUM. 2-cyl. 10 h.p. Two-seater Model. 275 guineas		Saloon	750
Four-seater Model	295	WOLSELEY TEN. 4-cyl. Two-seater ..	£500
Coupé	365	Three-seater	585
PHOENIX. 4-cyl. 11.9 h.p. Two-seater Complete	£425	Coupé	600
RILEY. 4-cyl. Four-seater	£490	WOLSELEY FIFTEEN. 4-cyl. Touring	£800
Two-seater	465	Saloon	1,000
Coupé	545	WOLSELEY TWENTY. 6-cyl. Touring de luxe	£1,150
ROLLS-ROYCE. 6-cyl. Chassis only	£1,850	Landaulet	1,400
		Coupé	1,450
		ZEPHYR. 4-cyl. 11.9 h.p. Chassis Complete	£350

A TRUCK OPPORTUNITY FOR SHANGHAI.

Thirty Wichita Motor Trucks to be Placed on Local Market at Cost.

An unprecedented opportunity for persons interested in the purchase of motor trucks or firms who desire to buy motor vans is being offered in Shanghai. The fleet, which is to be sold at cost, consists of thirty of the well known Wichita trucks, all brand new, in excellent upkeep, and some are still in crates ready for shipment.

In addition, with the trucks are being offered two sets of tires each and a complete supply of spare parts. The agency for the vehicle is also open to parties interested.

A number of truck lines have been proposed for different parts of China, and many Shanghai firms have evinced an interest in the purchase of motor freighters and this will prove an excellent opportunity for them.

MAY HAVE SHORTAGE OF TIRES IN U. S.

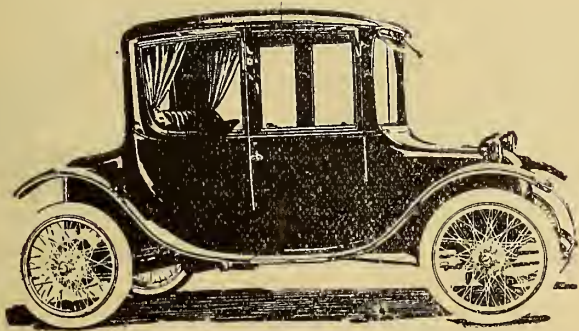
Lack of Cotton Fabric Predicted to Cut Down Output, According to Report.

That there may be a shortage in the production of automobile tires during the year of 1920 in the United States due to extraordinary conditions now prevailing with the cotton mills in the United States, is the report which has been received in Shanghai by the local office of Edward Maurer Co., Inc., of New York.

A serious shortage in the cotton fabrics which go into the manufacture of tires has already been experienced, the report declares, and various tire manufacturers have reported that unless conditions improve that the shortage in cotton fabrics will have its reflection in the lowering production of tires.

Milburn

LIGHT, ELECTRIC



Any One Can Operate A Milburn

Many owners do it and derive a great deal of pleasure from it.

There is a certain attachment that springs up between a man and his car when he runs and operates it himself. But this is possible to a great extent with electrically driven cars only. The highly complicated mechanism of some cars demands too much attention, and the care is left to chauffeurs.

Run a Milburn of your own and the pleasure of automobile riding will increase many fold.

Andersen, Meyer & Co., Ltd.

SHANGHAI



7 Yuen Ming Yuen Road

Telephone Central 778



Also at Peking, Tientsin, Hankow and Hongkong.

M 10

NEW AMERICAN CARS ON LOCAL MARKET.

Commonwealth and Spacke to be Sold by Frame, Leaycraft and Company in China.

Two of the latest American motor cars, whose introduction in the field of automobiling in the United States has caused quite a furore, are to be introduced to the motor-pub of Shanghai and China by Frame, Leaycraft and Company, importers and exporters of New York and London, who have recently opened offices in Shanghai at 51A Kiangse Road, in charge of Mr. E. P. Gosling.

The two machines are the Commonwealth and the Spacke. The Spacke is said to be one of the sensations of the opening season in the United States and of the New York motor show, being the first car to ever be offered on the market at a price below that of the Ford. More than this, it is said to be equal if not superior to the latter mentioned machine both in body lines of construction, and in performance.

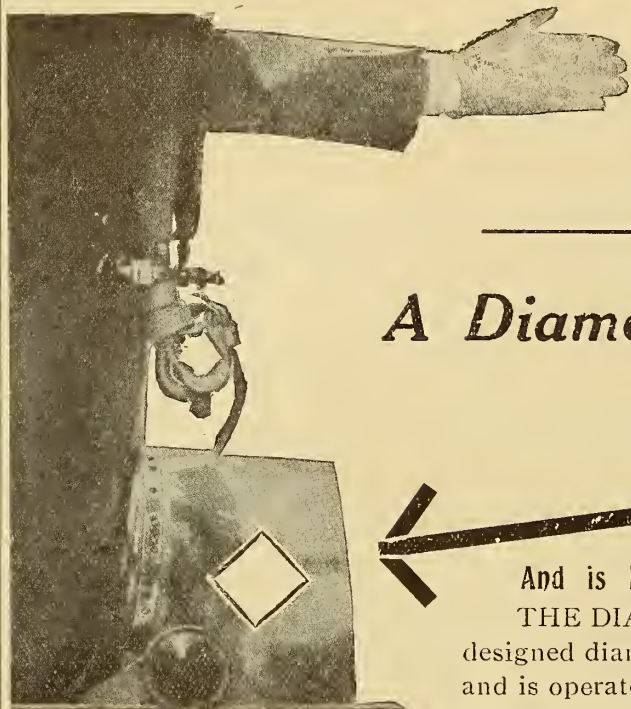
The specifications of the Spacke follow: two passenger roadster body, two cylinder engine, $3\frac{1}{2}$ bore, $3\frac{5}{8}$ stroke, own make engine, 90 inch wheelbase, battery type of ignition, Atwater-Kent make, Carter carbureter, cone clutch, two speeds forward, and special own make rear axle. The price

of the new machine has not as yet been announced in China but it is certain that when this comes it will be a great surprise even to the most imaginative.

The Commonwealth Four-Forty is the production of a company which has recently been organized from experts for the use of gasoline and oil burning engines, and the production of motor cars. The specifications for the Commonwealth are: five passenger body, Lycoming four cylinder engine, $3\frac{1}{2}$ bore, 5 stroke, 32 x 4 front and rear tires, 116 inch wheel base, battery ignition, Atwater-Kent, Dyneto starting and lighting system, Carter Carbureter, disc clutch, three speeds, full floating rear axle, Peru make.

In Shanghai the Commonwealth enjoys the distinction of being the first motor car ever offered on the local market at a price in gold dollars.

The China branch of Frame, Leaycraft and Company will also have on the market within a short time a full line of motor accessories coming from the foremost manufacturers of such products in the United States and elsewhere.



**EFFECTIVE
NIGHT AND DAY**

Stocked by

H. S. Honigsberg & Co., Inc.,

40 Bubbling Well Road

SHANGHAI

Telephone West 1234

**THIS SIGNAL
MAY MEAN NOTHING**

BUT

***A Diamond Stop & Turning
Signal Here Does Mean***

SOMETHING

And is Instantly, Instinctively Understood by a Driver Following
THE DIAMOND STOP AND TURNING SIGNAL consists of two nicely designed diamond shaped lamps mounted on right and left side in rear of car and is operated by a small one-lever switch, which is fastened to the steering column, close under the steering wheel. All three signals, STOP, RIGHT or LEFT, are given by the same lever, which flashes a red light on right for RIGHT turn, on left for LEFT turn and both lamps for STOP.

HIGH RECORD OF AUTOMOBILE EXPORTS SHOWN FOR U. S.

Motor Car Manufacturers Send Products to all Parts of the Civilized World.

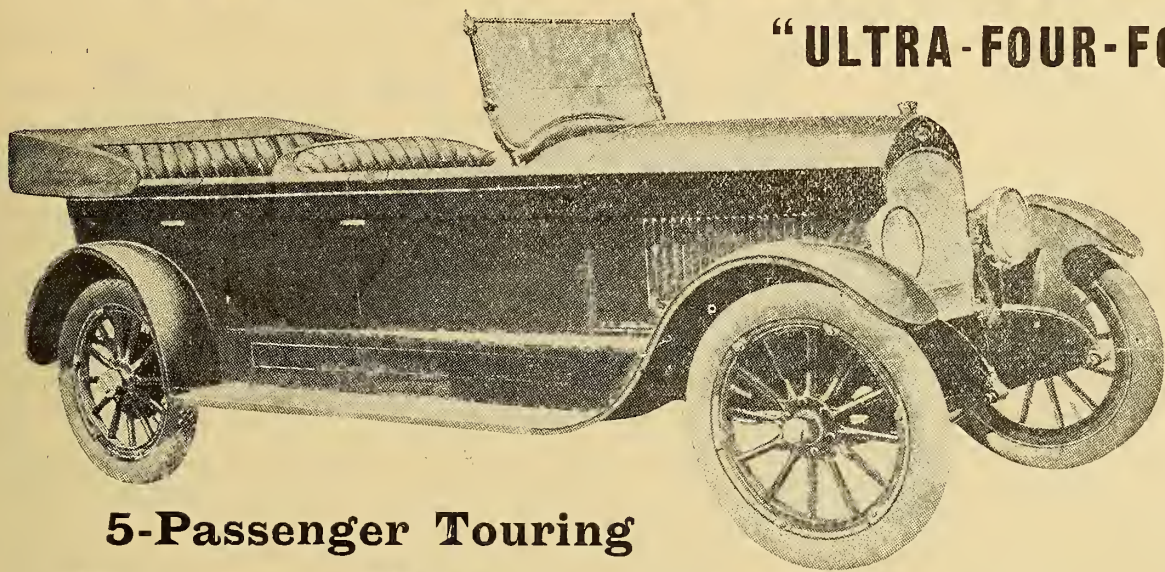
The recent assertion that three-fourths of the automobiles of the world are owned in the United States and that nine-tenths of those new in the whole world were produced in manufacturing establishments of the U. S. lends interest to a compilation by The National City Bank of New York regarding American exportation of automobiles from the earliest date to the present moment.

These figures show that the exports of automobiles and parts thereof, including tires and engines, have, in the 20 years since the exportation began, aggregated about \$1,000,000,000. The calendar year 1919 surpassed all records, even that of the war years when large numbers of commercial autos were sent to Europe for use in the war area. The value of automobiles and parts thereof, including tires and engines, exported in the calendar year 1919 aggregated approximately \$185,000,000 as against \$14,000,000 in the fiscal year 1916, the former high record; \$38,000,000 in the fiscal year 1914, all of which immediately preceded the war; \$11,000,000 in 1910; \$2,500,000 in 1905, and slightly less than \$1,000,000 in 1902, the first year in which automobile exports were considered of suffi-

cient importance to justify a separate statement in the Government record of merchandise exported. Of the \$185,000,000 worth of automobiles and parts thereof exported in the calendar year 1919, \$35,000,000 worth were commercial cars; \$75,000,000 worth passenger; \$41,000,000 "parts of automobiles"; nearly \$30,000,000 worth tires, and about \$5,000,000 worth of automobile engines.

Where do they go? Literally to every part of the world. France, formerly a very large manufacturer of automobiles, is showing a remarkable appreciation of the American commercial machine, the total number of commercial automobiles sent to that country in the calendar year 1919 having been about 3,600, valued at over \$15,000,000; though of passenger machines the demand from France is comparatively small, the total for the calendar year 1919 aggregating less than 1,000 and the value but about \$2,000,000. Great Britain, which took large numbers of commercial machines during the war period is now apparently manufacturing them for herself, for the total value of commercial machines sent to that country has fallen from \$20,000,000 in 1917 and nearly \$7,000,000 in

INTRODUCING
THE COMMONWEALTH
"ULTRA-FOUR-FORTY"



Price
G. DOLLARS
1,800
Delivered
Shanghai

5-Passenger Touring
"The Car With the Foundation"

A car that has been thoroughly tested and has proven its reliability in many countries of the world. Its graceful and artistically designed body, elegant finish, efficient upholstery and beautiful top are immensely pleasing.

THE COMMONWEALTH owes its reputation as a car mechanically right to its sterling structural features and actual road performance.

FRAME, LEAYCRAFT & Co., Agents for China.

51A KIANGSE ROAD **SHANGHAI** PHONE C. 1901

1918 to only about \$500,000 in 1919. Cuba is apparently appreciating the auto truck, for the number sent to that island in 1919 is about 750, valued at nearly \$2,000,000, as against 557 in 1918, valued at about \$1,000,000.

Sixty countries and colonies took American commercial machines in 1918, the latest year for which a detailed statement is available, and the number of countries taking passenger machines was 80. Iceland took in 1918 40 passenger machines at a value of \$34,000, and one commercial machine, valued at \$2,245. To Siam, the number of passenger machines exported in 1918 was 85 at a value of \$75,860; to India, 72 machines, valued at \$70,254, and 11 commercial machines, valued at \$22,000. To the far off Dutch East Indies, we exported in 1918 no less than 1,260, passenger machines, valued at \$1,567,766, and of commercial machines 154, valued at \$335,536, while the figures for the calendar year 1919 indicate a total of about 2,000 machines, valued at approximately \$2,500,000.

The imports of automobiles into the United States which have aggregated \$31,000,000 since the first record, that of 1906, have declined from the high water mark of \$3,837,000 in 1910 to \$524,709 in 1919.

WHAT BECOMES OF THE OLD CARS?

The Eternal Question Analyzed.

You hear it said ever and often, "Where do all the old automobiles go?", and well can one ponder over that question as there are upwards of a million cars traded in or replaced every year and the old models must go—somewhere.

In answering the question, H. T. Wheelock of the Velie Company, U. S. A., said :—

"The majority of old cars go to the junk man, of course. They were improperly built originally and did not stand up as will the cars of today; they were too expensive to operate, and not at all comfortable or efficient. Those old cars deserve to be melted up and used again.

"Then there are the fairly good cars which are converted into trucks and serve a period of usefulness before being finally claimed by the scrap man. Then, the majority of cheap cars, whose short life is the joy of the iron dealer, and finally the old cars that are still serviceable and going strong. Not all the old cars, however, have outlived their usefulness; as is the case with the man himself—a car is only as old it feels.

MOTOR CAR INSURANCE

THE COMPREHENSIVE POLICY

OF THE

ALLIANCE ASSURANCE

COMPANY, LIMITED

(ASSETS OVER £24,000,000)

Affords FULL COVER to Motorists,

INCLUDING—

LIABILITY TO THIRD PARTIES.—

DAMAGE TO, OR LOSS OF, CAR

(including lamp and accessories) by—

Collision or other Accident,

Fire, Lightning, Explosion or Self-Ignition,

Robbery or Theft or any attempt Thereat,

Malicious and Wilful Acts by any Persons.

MEDICAL & SURGICAL EXPENSES

ADDITIONAL BENEFITS

Can be included in the Policy by Arrangement

ABSOLUTE SECURITY

**PROMPT AND LIBERAL SETTLEMENT
OF ALL CLAIMS.**

AGENTS—

JARDINE, MATEHSON & Co., Ltd.,

SHANGHAI,

AND AT

TIENTSIN, PEKING, HANKOW, TSINGTAO.

MOTOR TRUCKS MEET EMERGENCIES.

**Utility of Gasoline Transport Demonstrated in Time
of Need in City and Nation.**

Having had a great share in winning the war for the Allies, the motor truck, lorry, or camion, as it is called in different countries, has since been rendering a tremendous service in keeping open the arteries of commerce. With steam and electric railways crippled by strikes, the only means of transporting food and passengers, in many districts of several countries, has been the motor vehicle.

Some months ago found New York, largest city of the world, facing a tie-up of all its transportation facilities. Hundreds of thousands of people who came miles each morning to their work in office or store, would, but for the saving motor truck, have been kept at home, with a consequent large loss in wages, to say nothing of the great harm to business in general. Thousands of commercial vehicles were instantly placed in service along regular routes, several hundred of them under the direct control of the city administration. So efficient did the system prove that a comparatively small percentage of the commuting population were kept from their work by the strike.

Even more dramatic use of the motor truck was made throughout England during the recent nation-wide shut down of the railroads. At midnight on the 26th of September the blow fell that was designed to paralyze the entire movement of persons and supplies throughout Great Britain. Within twenty-four hours motor trucks were at work clearing the great London railroad terminals of perishable goods; motor mail services were running between the larger centres, and a skeleton road-transport had been organized. Offers of service poured in from all sides. Among the classes appealed to by the Government on the 28th were those experienced in the organization and control of motor transport on the road, engineers with experience in maintenance and equipment of motor vehicles and drivers and mechanics for petrol driven trucks.

The response was immediate. Men and women poured in to register as drivers and offers to vehicles were received by the thousand. By the 29th, a wide system of motor transport was working throughout the country. From Edinburgh, Liverpool, Sheffield, Portsmouth, and other towns reports came in that motor trucks were bringing in supplies, distributing food, material and mails; that large motor buses were carrying passengers; that private cars were carrying all possible to and from their business and that motor vans and trucks were taking the place of workmen's trains.

By the time that the strike was brought to a close, the country was actually over-supplied with food stuffs conveyed by motor. The shops were full of commodities; there was no lack of milk supply—everything had been worked out on a highly efficient basis. Petrol was placed on a priority schedule as follows:

We will sell you a

BRISCOE
THE CAR WITH THE
HALF-MILLION DOLLAR MOTOR

FAVOURABLE EXCHANGE

has made possible this

BIG REDUCTION

5 Seater Touring

2 Seater Roadster

EVERY CAR IS GUARANTEED FOR ONE YEAR

FITTED WITH H. T. MAGNETO AND OVERSIZE TYRES, ELECTRIC STARTING AND LIGHTING. LOW PETROL CONSUMPTION. EASY PAYMENT SYSTEM MAY BE ARRANGED

For demonstrations, apply to

THE AUTO PALACE Co.,

362 Avenue Joffre, SHANGHAI. Telephone W. 465

Practical Motor Engineers

For Taels

1,100

1. Food transport. 2. Mail services. 3. Medical needs. 4. Municipal requirements. Some idea of the vastness of the road transport scheme may be gathered from the fact that over 5,000 trucks were used for the conveyance of milk alone, 1,000 of these bringing milk to London. More milk was brought into Liverpool in one day than had ever been brought there by the railways.

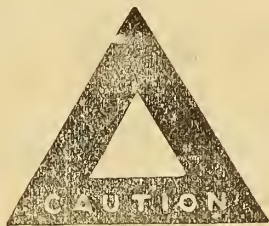
The result of these great tests of the worth of motorized transport is to prove unquestionably the necessity of putting this system on an equally efficient basis with the railroads. The future must be one of roads and yet more roads over which the motor truck can operate on regular schedule as not only a feeder to the railroad on long hauls but as a separate entity on many shorter hauls. One instance of the practical operation of this is at Liverpool, where one-third of the imported food of England enters. The motor distribution scheme evolved there during the strike is so much more efficient than the former method of railway shipment that it will undoubtedly be retained.

In the United States the development of motor transport has been extremely rapid during the past few years. In many districts truck express services have been placed on a regular schedule basis, which not only relieve railroad congestion but frequently reach territories long without any freight transportation facilities. The result is that additional food supplies reach the markets, with a consequent price reduction, and other material is delivered far more quickly

than when the railroad alone had to be depended upon for transportation. The community is also protected from the results of railroad strikes and freight embargoes. One forty mile route over good roads in the state of Ohio has relieved the railroads in that district to the extent of 800 freight cars a week.

The Government is beginning to take advantage of the experience of private owners of commercial cars and trucks and is installing motorized transport for the carrying of the mails and parcel post. The system will be composed of great truck lines running from north to south, with numerous feeder branches radiating into the surrounding country. Assistant Post Master General Blakslee estimates an annual income of \$200,000,000 will be received by the Government from this source with expenses of only \$50,000,000. On one postal route alone during the past year the profit was \$90,000.

In 1914 the number of commercial cars in use in the United States was 136,000. In 1918 it had increased to nearly 600,000. The estimated production for 1919 is about 300,000 of which 40,000 will be made by the General Motors Corporation alone. Succeeding years will expand production and use of the motor truck at an even more rapid rate. Motor transport and good roads are the answer to food scarcity and freight congestion. The world realizes that, and is demanding and buying the trucks and appropriating millions of dollars for the roads.



IT IS more profitable to insure your car BEFORE a smash than afterwards. You have bought the most suitable car for your purpose—now take out the most suitable policy to protect that car.

The "YANGTSZE" Policy offers the fullest possible protection and is the most generous to the car owner.

RING UP THE
YANGTSZE
INSURANCE ASSOCIATION, LTD.

(Shanghai Central 5475)
 and ask for a prospectus.

HIRE CARS
MORIMURA GARAGE Co.

N. 2938—Telephones—N. 2939
 I. 13 North Soochow Road, Shanghai

MOTOR CAR & MOTOR CYCLE
Repairing & Overhauling

All kinds of Rubber Goods
GOODRICH TIRES

Show Room: 137 Chapoo Road.

YOU'LL NEED
THE ORIENTAL MOTOR

EVERY MONTH

Why Not Subscribe To-day?

MONCHEN GARAGE CHANGES HANDS.



Modern Building erected 1918.

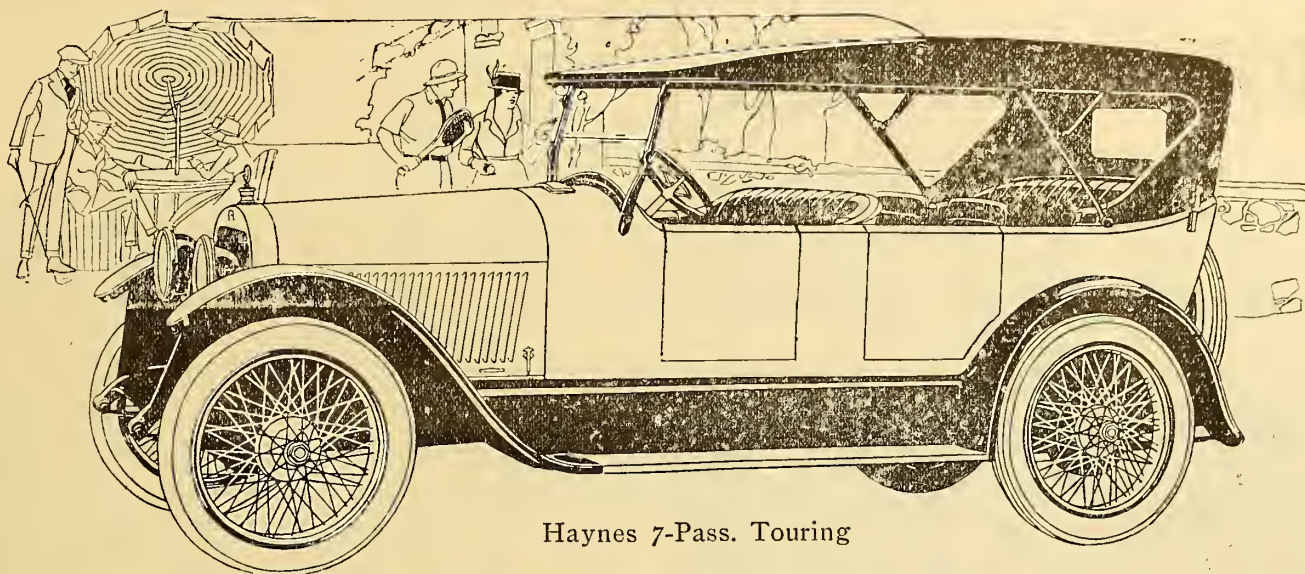
Joseph Ph. Monchen, who has been operating the Monchen Garage, Tsingtao, has sold the concern to Japanese interests who will continue under the name of Monchen Motor Co.

New York Show Proves A Winner.

(Continued from Page 10.)

To mention a few more or less distinctive examples that recur to mind, there is the new Willys-Knight "pentagonal" effect, which is secured by making a break in the upper curve of an otherwise rounded radiator, thus forming a slight vertical ridge on either side and also a slight "shelf" effect at the edge. These lines, however, disappear at the cowl. The redesigned Briscoe, a much larger appearing car than its predecessors, has the rounded hood and radiator effect in combination with a beveled edge body in the touring car. The well-remembered Hudson design, on the other hand, remains practically intact in general effect, as do a number of others, including the Chalmers, Chandler and Liberty. Fenders also are a means of determining the new lines. A new note in fender design this year is a return to some form of ornamentation. This may be the double radius section peculiar to Dodge Brothers cars, and therefore an almost universal standard in the public eye, or afforded a sharply defined panel effect, as in the case of the trig little Scripps-Booth, and quite a number of others. Close-fitting guards without running boards appear on a very special Velie sport car built for the show and having a distinctive sharp line effect carried throughout, that renders it essentially a car to be looked at twice.

More distinction in lamp designs is noticeable than in many previous years. As still another new note in the show, there was the disc wheel. This appeared, in a sense, on trial, but was displayed by a number of makers, usually in conjunction with both wood and wire wheels as options. Of the new sport cars carrying "California" tops, and having in several instances the flat back and sharp body corner, there were several examples.



Haynes 7-Pass. Touring

THE WELL KNOWN HAYNES CARS

5 and 7 Passenger Touring and Roadster Models

IN STOCK

We always have a good stock of Used Cars—best makes only. We also have for immediate delivery a number of Motor Trucks in various capacities ranging from 1½ to 3½ Tons.

Phone C. 402

AUTO CASTLE 228 Avenue Joffre

DUPONT FOUR MAKES INITIAL BOW.

\$3,000 Chassis Has Exceptionally Easy Steering and Other Modern Features.

The name DuPont has been associated with so much activity during the past year that it is no surprise to many to learn that the name has entered the automobile field. E. Paul DuPont, son of the late Francis G. DuPont, is head of a new concern to manufacture the four-cylinder DuPont car, which made its first appearance at the Salon in New York. One stock model is being offered for the present, a touring car which sells for \$4,000. The chassis alone is \$3,000. One is impressed more than anything else with the clean-cut design of the entire car, which has every expression of being excellently made. Though the main units are substantially designed according to convention, there are numerous details which are not used on any American cars. One of the most impressive features is the ease of steering, the system being designed after racing practice. One may try the wheel when the wheels are resting on the ground and steer as freely as though they were entirely off the ground.

The four-cylinder engine is an L-head block-cast design mounted with plate clutch and four-speed transmission in

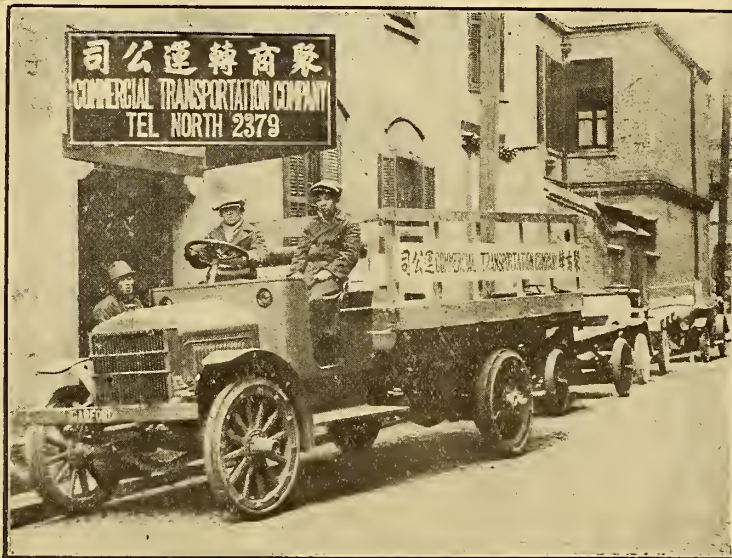
unit. The drive is conventional. The wheelbase is 124 inches and the tires 32 by 4½. We are not able, at this time, to give the details of the equipment used, as the manufacturer is as yet undecided as to those that will be employed, except to say that ignition will be by magneto.

The engine is a neat job in all details. An odd design is the intake manifold and carburetor mounting. The heat is taken from the exhaust manifold through the cylinder casting to the carburetor, the latter feeding to a manifold on the outside of the carburetor, which is reversed from ordinary practice. A force feed oiling system is employed, the pipes to the main bearings being outside the engine. The cooling is by thermo-siphon. The interior of the engine is for the most part conventional. The pistons are aluminum alloy, the rods I-beam and the crankshaft a three-bearing type.

Of particular importance is the rear suspension. The frame horn terminates in a universal to which the shackle is fastened and the semi-elliptic rear spring is attached to the shackle. An oil cup is suitably mounted to feed the joint.

MOTOR TRUCK SERVICE

'Phone North 2379



We can prove to you that you will not only save time but money as well by using our Truck Service.

**NOTHING
TOO BIG OR TOO SMALL**

Special Facilities for Handling
HEAVY CARGO

**A Big Factor is Safety in Transit
which we Guarantee.**

Let us Estimate on your Cartage
DAY AND NIGHT SERVICE

Commercial Transportation Co.
698 Tiendong Road, Shanghai.

THE ERA OF THE TRUCK.

American University to Teach Motor Transportation and Highway Improvement.

The horseless age! The saying is a trite one, and we have heard it so often it seems to be bromidic to say so again, but it will bear repetition. The "horseless age" did not come with the advent of the automobile. The passenger business or joy-riding automobile did not displace the horse. But now comes the truck and gradually this is displacing the horse and pushing its big brother, the locomotive, hard.

Recent developments indicate this in a very forceful manner. As one instance is given the commencement of the first course, the coming year, to train men to meet the needs of the phenomenally expanding highway improvements and motor transport upon which the United States is entering, by the University of Michigan. Classes started January 24 to 31, immediately following the big Highway Conference at Chicago. A great many of the men attending this conference are said to have made arrangements to attend the course.

Professor Arthur H. Blanchard, formerly of Columbia University, will direct the classes. This is the first course of the kind to be given in any university in the United States. Besides his own lectures, Professor Blanchard has arranged to bring to the university, men who are experts in the different subjects entering into the curriculum of study, that they may lecture on their own specialities and answer any questions asked.

Commenting on the regular and special courses he proposes to give, Professor Blanchard said:

"Development of highway transportation creates a demand for men having knowledge of and trained in highway transport engineering. Fundamentally, this branch of engineering deals with the science, art, economics, and business of transporting passengers and commodities."

The course will include a consideration of the following subjects:

History of American transportation and rural development; English highway transport methods and legislation; inter-relationship of highway, railway, and waterway transportation including influencing factors of distances, rates, kinds of freight, and equipment; port, terminal, and warehouse facilities; inter-relationship of highway transport, good roads, and rural development; American highway traffic legislation including national, state, county, township, and municipal laws, licenses, taxes, and traffic regulations; fundamentals of highway engineering affecting economic highway transport; American highway transport methods and transportation surveys.—"International Trade and shipping Digest."

HOW ABOUT YOUR BATTERY TROUBLES?

ARE YOU STILL HAVING YOUR BATTERY CHARGED IN THE OLD WAY?

IF YOU WANT **REAL BATTERY SERVICE** SEND
YOUR CAR TO US.

AND IF YOU ARE SUFFICIENTLY INTERESTED KINDLY
CALL AND WE WILL EXPLAIN THE SUPERIORITY OF
OUR BATTERY SERVICE SYSTEM IN DETAIL.

THE CHINA GARAGE Co.

21 FOOCHOW ROAD.

SHANGHAI.

TEL. C. 2403.

MILBURN PLANT HAS A FIRE.

**Property and Equipment Valued at \$900,000 Lost in
Recent Blaze.**

The Milburn Wagon Company, manufacturers of the widely known Milburn Electric, experienced a loss of \$900,000, including thirty complete electrics and many automobile bodies, in a fire that destroyed a portion of their plant at Autumndale, a suburb of Toledo, Ohio, U.S.A., in late December. The loss was fully covered by insurance.

The fire, however, only temporarily stopped the operations of the company as a new building is now in process of erection and is expected to be ready for occupancy on March 1. During the interim, the company has been filling the demands of the dealers from temporary plants.

The Shanghai motorists, however, will not suffer from the loss of the company since a shipment was made to the local agents of the Milburn Electric, Andersen, Meyer and Co., Ltd., two days before the conflagration.

NEW SAFETY DEVICE BROUGHT TO CHINA.

**Diamond Stop and Turning Signal Will Lessen Possibility of
Traffic Accidents.**

The Diamond Stop and Turning Signal, a new safety device to avoid traffic accidents, has been brought to Shanghai and China by H. S. Honigsberg and Co., Inc.

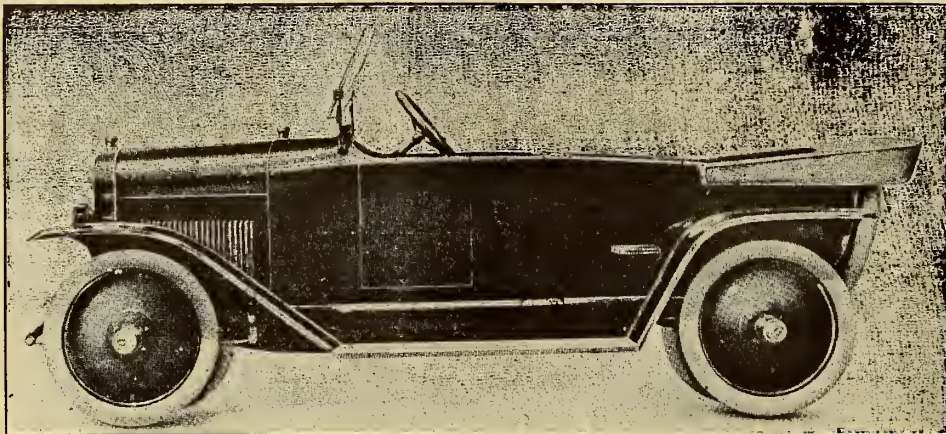
The device consists of two diamond shaped lamps fastened at the right and left sides of the rear of a machine, made in such a manner as to be effective both night and day. Both lamps show red when a "stop" is indicated, left red for a left turn, right red for a right turn. The device may be attached within a few moments.

The signal is operated by a small one-lever switch, fastened under the steering wheel to the steering column. Turning the lever to the right gives the right turn signal, to the left the left turn and upward the stop. It is so constructed as to be absolutely "fool-proof."

These devices are now experiencing a large sale in the United States and are required by city ordinances and state laws in many sections.

A NEWCOMER IN SHANGHAI MOTORDOM.

The post-war model Diatto-Gnome, an Italian Motor car, which will soon be on sale in China. It has a four wheel brake, four cylinder motor 60×90, three speeds, and a friction drive.



THE OVERLAND 4 A DEPARTURE.

Details of the Newest Low Priced American Vehicle with Remarkable Spring Suspension Construction.

Overland's light 4 is on the market after a development period lasting several years. This model, for which big production has been planned, shows what actually can be done in the low-price car field in producing a light car of short wheelbase and, at the same time, utilizing a long springbase for a roomy five-passenger body. The feature of this car is its spring suspension, which first attracted attention two years ago at the New York show. By means of this, the car of 100 inches wheelbase is given a springbase of 130 inches and riding qualities of a superior degree, which many believed could not be had in a car of that price. The suspension is referred to as a three-point cantilever. In order to utilize it, it has been necessary to devise a frame of unusual shape. There are two straight, reversed side rails (channel outside) with curved connecting members at either end. These members extend beyond the end of the rails, thus providing a means of spring attachment 15 inches beyond the wheelbase points.

In front, there are really four springs. Two of these are of six leaves each and two of one leaf each. The former are above the axle and the others below. An eye bolt secures the springs to the axle, while a bolt and clip are used for frame attachment. In the rear there are two eight-leaf springs, the left being bolted to the frame and shackled to the brake support, while the right is attached to the axle by the usual eye bolt. The one shackle takes care of elongation in the rear. These rear springs take the driving effort.

Aside from its spring suspension the new Overland is novel in many other respects for a car of this class. It is sold completely equipped in every detail and shows construction of the more advanced sort in every unit. A unit power

plant is used for the first time by Overland and the drive rearward through an enclosed single-joint propeller shaft, to three-quarter floating axle with spiral gears. The axle ratio is 4 to 1.

The L-head engine is of conventional design with block cylinders and a detachable head. It is syphonically cooled and oiled by pressure. The engine flywheel operates in a bath of oil which is thrown from the periphery of the wheel and by its centrifugal force maintains sufficient pressure for circulation. An advanced form of complete unit oiling is used, for the one reservoir feeds oil to the three crankshaft bearings, engine interior clutch, transmission and universal. This is a step forward in car lubrication which many have predicted.

Auto-Lite electrical units are used throughout, the starting-lighting being by means of separate units. The Tillotson carburetor is fed by gravity from a cowl tank of ten gallons capacity. To say the least, the power plant is cleanly designed and fits well into this remarkable chassis.

The clutch is a dry plate design running in oil. Cone clutches have been featured by Overland up to this time. The unit transmission is a conventional three-speed set, using ball and plain bearings.

The remainder of the chassis is conventional, except the steering, which has a planetary set at the bottom—a form of construction not frequently seen.

Every detail has been worked out to make the car represent the most advanced low-priced vehicle on the market and one which rightfully should take a place in the line of automotive progress. The weight is given at 1,825 pounds in touring form, and even with that weight the car is so well balanced as to provide a high degree of riding comfort.

High Grade

American Gasoline

Spot Stock

We offer you a rare opportunity to buy your Requirements at the Right Price. Immediate delivery. Proper quality. It will pay you to investigate.

Call or write to

A. F. THANE & Co.,

26, Canton Road, Shanghai.

FIGURES SHOW MARKED GROWTH IN AMERICAN
AUTO YIELD.

Some highly interesting figures in connection with the motor industry in the United States dating from 1899, are given in the following table :

PASSENGER CAR PRODUCTION.

Year—	Number	Wh'sale value
1899	3,700	\$ 4,750,000
1904	21,281	23,634,364
1909	127,731	159,918,506
1914	543,679	413,859,379
1917	1,740,792	1,053,505,781
1918	926,388	801,937,925
1919	1,586,787	1,399,282,995
Average whole-sale price for 1919—\$882.		

MOTOR TRUCK PRODUCTION.

Year—	Number	Wh'sale value
1904	411	\$ 946,947
1911	10,655	22,292,321
1917	128,157	220,982,668
1918	227,250	434,168,992
1919	305,142	408,311,585
Average wholesale price for 1919—\$882.		

Total motor vehicle production in 1919 was 1,891,929, valued wholesale at \$1,807,594,580.

NORTH BRITISH

AND

MERCANTILE INSURANCE CO.

MOTOR CAR INSURANCE

MODERATE RATES

AND

COMPREHENSIVE CONDITIONS

INCLUDING

UNLIMITED THIRD PARTY LIABILITY.

AGENTS:—

E. D. SASSOON & Co., 9 Jinkee Road

MANAGER:

E. E. PARSONS, 12 Hankow Road

SHANGHAI.

MOTOR CAR INSURANCE

**REDUCED RATES
AND
SPECIAL CONDITIONS**

GENERAL

ACCIDENT, FIRE AND LIFE
**ASSURANCE
CORPORATION, LIMITED.**

For prospectus apply to the

FAR EASTERN MANAGER,

4A PEKING ROAD, SHANGHAI.

or WHEELLOCK & Co., French Bund.

SHANGHAI HORSE BAZAAR AND MOTOR COMPANY, LTD.

Exclusive Agents For :—

FIAT CARS

BERLIET CARS

STEARNS CARS

STUDEBAKER CARS

SCRIPPS-BOOTH CARS

ARROL-JOHNSTON CARS

THORNYCROFT TRUCKS

UNITED STATES TIRES

SAVAGE TIRES & TUBES

PREST-O-LITE BATTERIES

STEWART-WARNER PRODUCTS

And various lines of Accessories.

SHANGHAI

36 Bubbling Well Road

'Phone W. 1641

AMERICAN 1919 MOTOR OUTPUT REACHES TWO BILLION VALUE.

**Alfred Reeves of American National Automobile
Chamber of Commerce Gives Some
Interesting Statistics.**

BY LEON J. PINKSON.

(Motor Editor of The San Francisco Chronicle.)

It was only twenty years ago when automobiles were barred from Central Park in New York and Golden Gate Park in San Francisco," writes Alfred Reeves, general manager of the American National Automobile Chamber of Commerce, in his annual review of the American automobile industry. Yet within these two decades," he continues, "no year has gone by except the war year of 1918, which has not seen an increased demand for these time-saving vehicles, now such an important part of our American life, having advanced from the position of toys for the rich to a position on a par with the telephone, telegraph and the railroads in their work of transporting men and merchandise.

In support of this statement Reeves has prepared an interesting statistical record that clearly shows the steady and substantial growth of the industry, until it stands today in the two billion dollar class, is second to the steel industry and is looked upon as the leader of standardized production and in its co-operative and constructive work sets a worthy example to other industries.

1919 is now the banner year for the number of motor vehicles produced, according to Reeves, who states:

"Notwithstanding the small production during the first three months of 1919, following the armistice, when the industry was on practically a 100 per cent war basis, motor car manufacturers made such gigantic strides during the other nine months that the year's production of 1,891,929 motor vehicles exceeds all previous records including 1917, when 1,868,000 cars and trucks were produced.

"Passenger car production was slightly less than in 1917, totaling 1,586,787 as against 1,740,000 for 1917. The truck production, however, increased substantially, rising from 227,000 in 1918 to more than 305,000 in 1919.

"The total wholesale value of passenger cars was \$1,399,282,995, an average of \$882 per car, while the truck value was \$408,311,585, an average \$1,338 per vehicle.

"The total value of these products was \$1,807,594,580, which, when combined with the wholesale value of bodies, spare tires and accessories to equip the cars or trucks ready for the owner's use, brings the industry close to the two billion dollar class with a practical certainty that this year its position will be second only to steel among the manufacturing industries of the country.

DODGE BROTHERS

Motor Car



The petrol consumption is unusually low

The tire mileage is unusually high

People come to the dealer with a real desire to own the car.

It is more than a mere willingness to buy.

A good opinion has been formed in advance.

The car seems to stand well everywhere, and with the best class of buyers.

Max Friedman
Sales Manager.

THE SHANGHAI GARAGE CO., LTD.

OPERATING

THE STAR GARAGE AND THE EASTERN GARAGE.

Our Main Show Room, Star Garage 125, Bubbling Well Road, Shanghai.

"The rapid advance of the truck has resulted from its meritorious performance in the war, in general commercial life, in connection with rural motor express lines and in practically every other department of commerce. Buses are increasing in great number, it being worthy of note that in Newark, N. J., 16,000,000 passengers were carried by buses during the first half of 1919, the fares amounting to \$800,000.

Looking into the future the general manager of the National Automobile Chamber of Commerce says: "Just how many cars can be used in the United States depends entirely on the improved roads and bettering the traffic conditions in big cities by the use of underground garages and parking places for cars not in use. There are many who believe that a few years from now will see 12,000,000 motor vehicles running in this country.

"Notwithstanding its giant strides in twenty years, the industry has not been one in which it was easy to succeed, as evidenced by the fact that more than 700 makers failed or retired from the business during the past six or seven years.

"Many new companies now going into the business will find the road difficult and success coming only to enterprising, well-financed and well-managed concerns having vehicles on a par with those now in use.

"One of the real reasons for the great growth of the automobile industry has been the appreciation that every

person wants an automobile. It is generally a question of price. The makers, therefore, worked to bring down prices and thus permit of increased production, which in turn brought prices down still further."

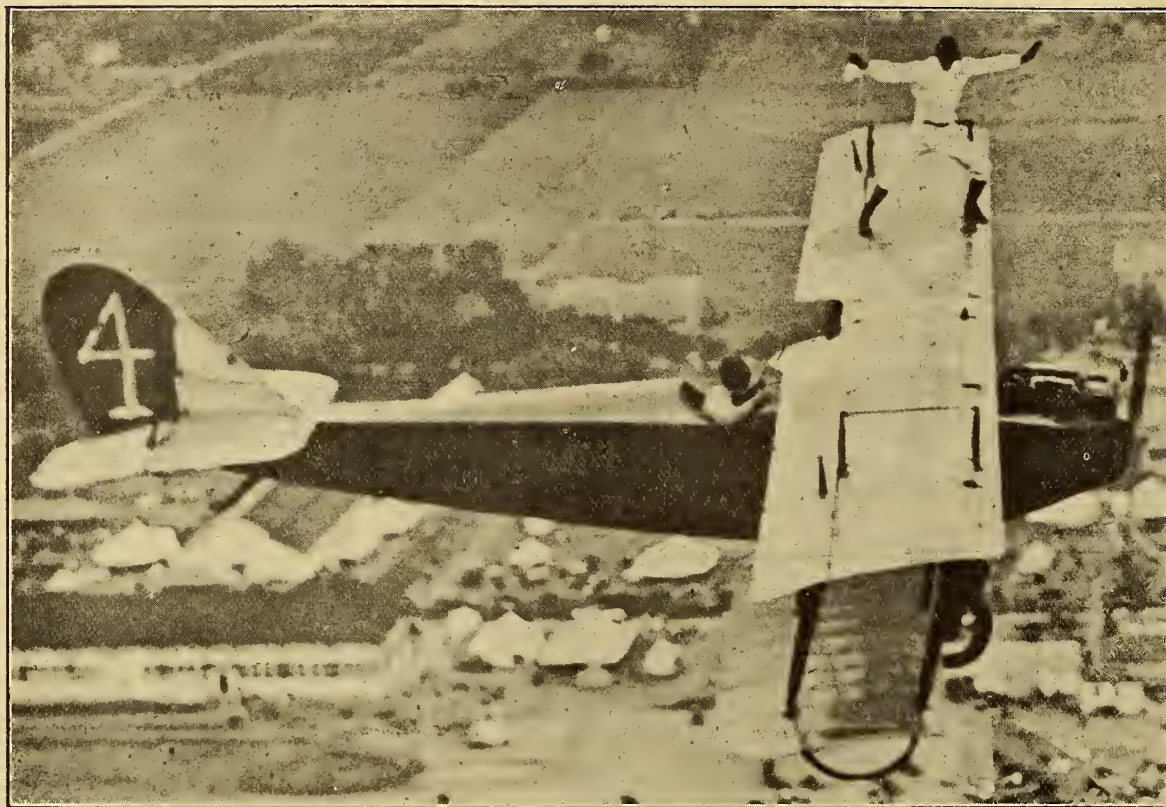
Regarding the tentative production of motor vehicles for 1920, Reeves substantiates a prediction made that the yield would pass the 2,000,000 mark. Reeves figures that the output of passenger cars should be not far from 2,250,000 cars with truck production between 400,000 and 425,000. It will in depend largely on materials, particularly in connection with closed cars, for which the demand is showing a tremendous increase.

Touching on the matter of automobile exports, Reeves says:

"Exports are now only about \$110,000,000, but this should increase substantially during the next few years. The world's markets are being covered by the automobile industry, our automobiles going last year to eighty-one different countries, including Iceland, which bought twenty-one cars and two trucks. There is a normal replacement annually of about 16 per cent of the cars in use. Final figures from the various states would indicate that almost 7,000,000 motor vehicles are now registered and running, in the United States. Of this number about 10 per cent are trucks."

THE WORLD'S NEWEST DAREDEVIL STUNTS.

Ormer Locklear, Former American Army Aviator, Performs on Speeding Planes Thousands of Feet Up.



Locklear standing on the upper wing of his biplane while at full speed in the air.

The world demands to be amazed and awed by new rockless and daring stunts continually and each new advance in science brings its attendant thrillers. The old leaping the gap on a bicycle, and looping the loop inside a hollow ball was soon followed by the looping the loop in an automobile and by the balloon leaps of earlier aviators. Now with the rise of the airplane comes the latest thrillers and their exponent, Lieut. Ormer Locklear.

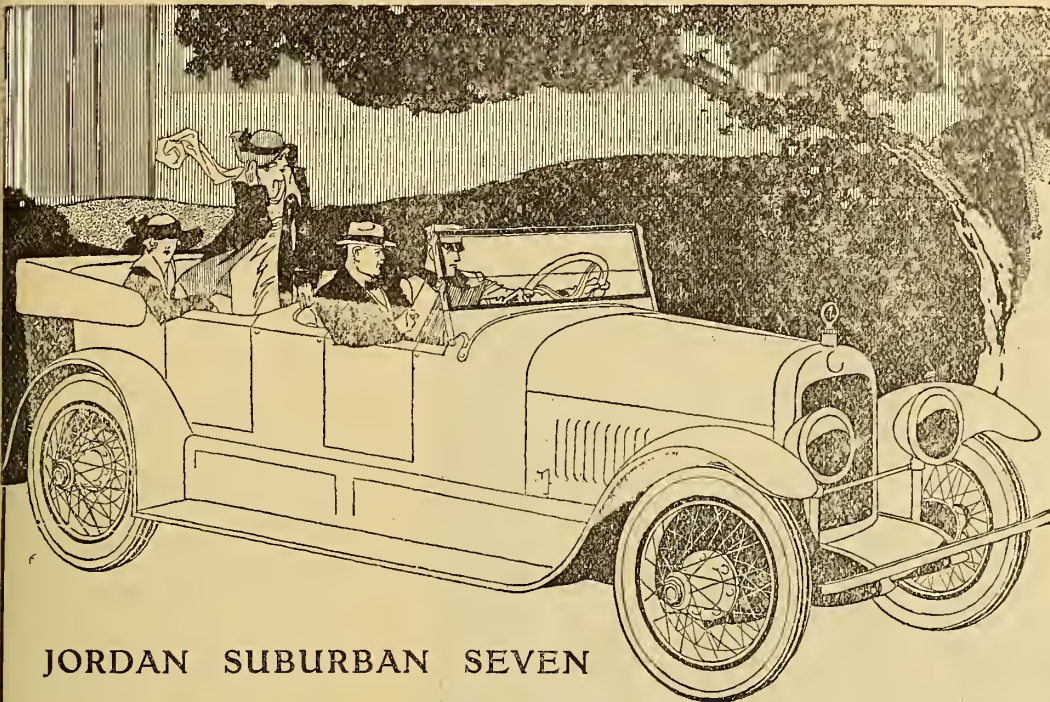
During the war, Lieutenant Locklear was a quiet and hardworking instructor at an army aviation field near Fort

Worth, Texas, U. S. A. But following the signing of the armistice and even before he received his honorable discharge from the service of the United States, Locklear began to startle his fellow aviators by hitherto unheard of stunts on the wings, fuselage, and axle of an airplane.

The story is told that Locklear would have a pilot "pal" drive his plane away from the government field to an open landing field some few miles distant at which place his wife would be waiting. Here his wife would climb into the pilot's seat, take control of the machine and thou-

Another view of Locklear standing on the upper wing, with the second plane to which he jumps shown on the right.





**DUE SHORTLY
COMMONWEALTH
ELGIN SIX
MITCHELL
JORDAN
MOTOR CARS**

JORDAN SUBURBAN SEVEN

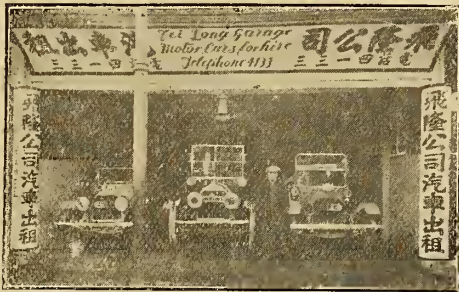
THE FEI LUNG COMPANY

OPERATING

THE FEI LUNG GARAGE

**HIRE
SERVICE**

153-4
Hupeh Road
Phone C. 4133



SHANGHAI AUTOMOBILE Co.



**SHOW
ROOMS
AND
SHOPS
F. 1787
Bubbling
Well
Phone W.
933**

**RED SPOT SEARCHLIGHTS
FORD PARTS**

**GOOD YEAR
TIRES**

**INDIAN MOTOR CYCLES
1 & 2 Cylinder IN STOCK**

sands of feet up in the air they would practice the stunts which have now made the aviator famous for his reckless courage and, according to many who have seen him, his foolhardiness.

After his release from the army, Locklear started on his present career of giving exhibitions, and newspaper picture supplements all over the United States have carried pictures of his stunts taken in the air, while his plane was being driven at top speed. From a comparatively insignificant instructor Locklear has come to be one of the most talked of men in aviation all over the world. Crowds everywhere stand with open mouthed astonishment to watch his antics.

Here are a few of Locklear's stunts: Standing erect on the tips of the plane's wings while in the air, doing trapeze stunts on the axle of the landing gear, jumping from one plane to another while both are going at full tilt thousands of feet above the ground, climbing by means of a

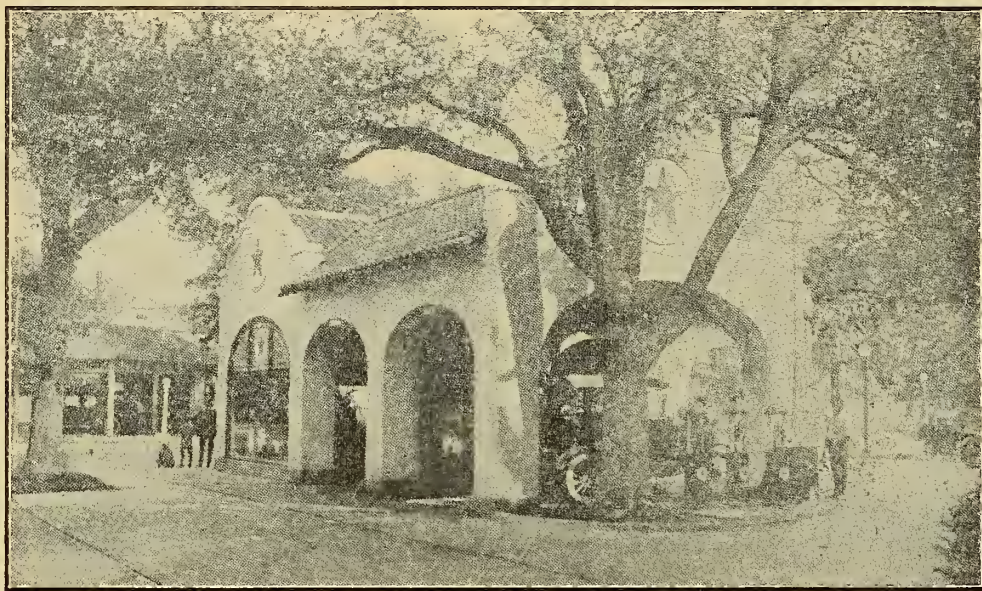
rope from one plane to another while both planes are speeding on their course riding on the fuselage, and a series of climbing stunts all over the plane in action.

There are rumors current that Lieut. Locklear is planning to come the Far East for an exhibition of his daring and will make a stop in Shanghai. Shanghai has been visited by several foreign stunt aviators but has never seen such flying as Locklear's brand.

While there is a great amount of recklessness in what the American bird man does, yet at the same time he has shown the world the stability achieved by the airplane and also the possibilities for aviators and particularly passengers and observers in times of emergency.

Only one other stunt, such as Locklear's, has ever been recorded in aviation. That being the leap of an aviator on the Western Front from a flaming plane to the fuselage of a second plane, whose pilot held it hovering close by to rescue his comrade.

A LOOK INTO THE FUTURE OF SHANGHAI.



A filling station of the Texas Company Houston, Texas. These stations are in universal use by all companies in the U. S. A. This may be taken as a suggestion of what the future may bring to Shanghai.

SHANGHAI'S NEWEST GARAGE
HIRE SERVICE ONLY
ALL NEW HUPPS

*Catering to that Class of Trade that
 Desires the Best.*

GREAT NORTHERN GARAGE Co.
 SHANGHAI. 14, Astor Road
 'Phone: N. 1463.

NETHERLANDS GUTTA-PERCHA CO.

SINGAPORE RUBBER WORKS
 SINGAPORE—SOURABAYA—BATAVIA—CALCUTTA—SHANGHAI.

Vulcanizing Compound and Canvas
Radiator Hose
Rubber Matting
Motor Pump Tubing
Solid Tires

Large stocks at our Shanghai Offices and Stores
 17 MUSEUM ROAD, SHANGHAI.

TRUCKS IN THE ORIENT.

Garford Man Returns to U. S. Enthused Over Prospects.

The truck will conquer the Orient just as it has conquered the Occident. Civilization is keeping pace with good roads and good schools, and the automobile is followed by the truck. So, the the great force pushing the world along the lines of modern achievement and culture is found in the means which make communication a pleasurable pursuit through education and facility of travel and the interchange of freight. The English and American influence in the Far East has been tremendously strong, and as a result good road conditions are gradually taking the place of the poor excuse for highways formerly the rule. But, despite the improvement, the Orient is still, except in spots immediately surrounding some headquarters of English influence or in the Philippines, a land of bad roads. Albert E. Fouts, the very capable export manager of the Garford Motor Truck Company, of Lima, Ohio, has just returned from an extended business survey of the Orient. Mr. Fouts visited Japan, China, the Philippines, India, and Java, where he has met with great success, and he speaks enthusiastically of the "ship-by-truck" movement in the Orient. The Garford is a very popular truck throughout the Far East, and through the intensive and capable presentation of its merits by Mr. Fouts it will be increasingly used in the rubber and sugar plantation districts and for general hauling. Mr. Fouts succeeded in overcoming the usual Oriental prejudice wherever he met with it.

OREGON STATE LEGISLATURE BOOST GAS PRICES.

New Standard Forces Rise from $1\frac{1}{2}$ to $2\frac{1}{2}$ Cents Per Gallon.

Oregon motorists are now "enjoying" an extra charge of $1\frac{1}{2}$ cents more per gallon for gasoline than their fellow motorists of Washington and California have to pay, according to a Portland dispatch. It really figures up $2\frac{1}{2}$ cents more per gallon, because of a state tax of 1 cent per gallon levied by the last legislature for the state highway fund.

The Standard Oil and Union Oil companies have just added $1\frac{1}{2}$ cents per gallon to the price of gasoline in Oregon and the Shell Co. and Associated Oil Co. are expected soon to follow suit, because of the Oregon law which requires that gasoline sold in the state must test 56 specific gravity, Baume. So far as known here no other state in the country requires such a test.

The oil companies declare the increase is necessary to cover the additional cost of putting the Oregon gasoline through a special refining process, of shipping it in special tanks, and of storing it in separate storage tanks. They assert that even $1\frac{1}{2}$ cents per gallon does not cover these additional costs and that Oregon motorists may have to face a still further increase in the near future.

Washington, California and other Pacific coast states have dropped the old specific gravity test, which the oil companies declare is meaningless so far as power value is concerned, and base their tests on the United States government specifications, which are based on boiling points. The gasoline sold in California and Oregon is of about 54 specific gravity.

But the increase in price is not the worst of it. As there is no market elsewhere for the special test gasoline required by Oregon, according to the oil companies, they make only enough of this specially refined product to supply the needs of the state. One result is that any delay in shipments causes a gasoline shortage there.

Last fall the shortage became so acute that the only gasoline in Portland was the stock in the service station tanks, any many towns in the interior were entirely without motor fuel. At that time Governor Olcott suspended the law for fifteen days to permit the oil companies to bring in gasoline of lower specific gravity from Washington to tide over the emergency. But the companies declare such a situation may occur at any time in the future, despite the increased price.

Governor Olcott recently called a special session of the legislature for January. The gasoline law is certain to be one of the matters brought before it.

At present motorists in Portland have to pay 25 cents per gallon for gasoline, which includes the 1 cent state tax per gallon. Just across the Columbia river in Vancouver,

MOTOR CAR INSURANCE

IS YOUR CAR INSURED?

OUR POLICY COVERS EVERYTHING THAT
CAN POSSIBLY HAPPEN TO A CAR

ALSO

COVERS LIABILITY TO THE THIRD PARTY

BEFORE INSURING YOUR CAR GET OUR RATES

PROMPT SETTLEMENT OF ALL CLAIMS

ASSURANCE FRANCO ASIATIQUE

7, Avenue Edward VII. Shanghai

J. BEUDIN & M. SPEELMAN,
General Managers.

Agencies:

TIENTSIN, 45, Rue de France.

HANKOW, Anderson, Meyer & Co.

PEKING, Regine's Building.

HONGKONG, Gérin, Drevard & Co.

BANGKOK, E. C. Monod & Co.

Oxy-Acetylene Welding SERVICE Why?

Because

1. Insures against long Shutdowns.
2. Saves the Pieces, Welds all Metals any size, shape or weight.
3. Prevents buying of New Parts.
4. Oxy-Acetylene is indispensable to the Metal Industry.
5. A Good Oxy-Acetylene Welder is an asset to a community.
6. When a breakdown puts your Machinery out of commission, no other method of repair is as efficient.

Write or Phone to

**CHINA OXY-ACETYLENE
WELDING WORKS
SHANGHAI**

Office Phone C. 1982.

1 Yuen Ming Yuen Rd.

Wash., only nine miles away, gasoline costs only $22\frac{1}{2}$ cents. The Washington gasoline appears to give just as much satisfaction as the higher priced special process Oregon motor fuel.

INSURANCE

Fire, Marine, Life,
Accident and Sickness.

Fidelity Guarantee

AND

MOTOR CARS

Commercial Union
Assurance Company, Ltd.

Total funds exceed £32,000,000.

China Branch Office;

UNION BUILDING.

4, The Bund, Shanghai.

WINDSOR GLASSES

The Vogue in
Eyewear

Let us show how
becoming to you
WINDSORS are.

We supply all kinds of
spectacles:

Motor Goggles,
Sun Glasses,
Crookes,
Torics,
Luxfels,

Kryptoks ground according to prescription.

Branches:

PEKING, TIENSIN, HANKOW, CANTON,
HONGKONG, CHANGSHA, NANCHANG.

CHINESE OPTICAL COMPANY

Head Office:—P352 Nanking Road, Shanghai.

Telephone C. 3895.

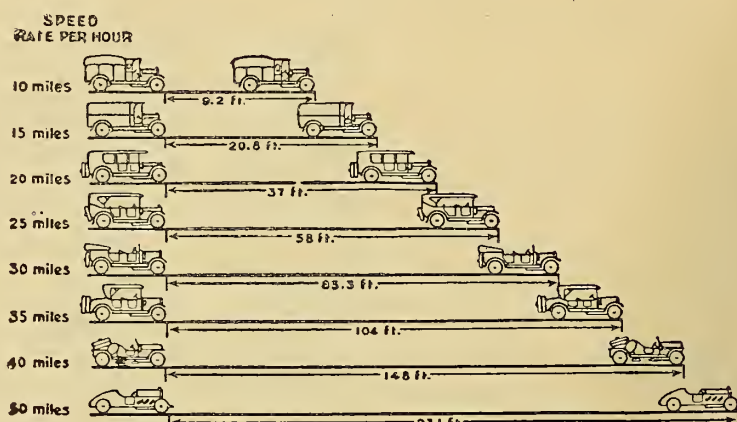
司 公 鏡 眼 益 精 國 中



If you want to know the specifications of any principal British or American motor car, turn to the Motor Car Prices and Specifications Department of "The Oriental Motor." The prices are there too.

STOPPING SPACE FOR MOTORS.

Do You Know How Far You Must Go to Come to a Standstill.



Leading automobile engineers have worked out the accompanying chart. It shows how quickly an automobile, going at various speeds, should be able to stop, providing the brake mechanism is efficient, and road conditions average.

CHEVROLET WINS GOLD MEDALS IN THIRD RUN TO CATALUNA.

American Car Proves Worth in Famous Spanish Competition.

One of the most famous of the Spanish motor car competitions is the Annual Test to Cataluna. This test consists of a trial run of 596 kilometers to demonstrate the dependability in action of the competing cars. Most of this run is over very rough roads.

The Third Test to Cataluna was held in 1919 during the days of June 7th, 8th and 9th. Two Chevrolet 490's were entered in this contest, one a stock car carrying five passengers, and the other equipped with a sport type body with three passengers.

Both cars, in spite of the poor roads, made the run without any trouble at all. This merely confirms the results of many other tests won by the Chevrolet in all parts of the world and proves that notwithstanding its low price and its inexpensive upkeep, the Chevrolet has quality which can be favorably compared with cars of much greater price and power.

Both Chevrolet cars were awarded gold medals as in the case of the second trial run to Cataluna which was held in 1917.

The Chevrolet is as popular in Spain as it is in the other countries of the world where it has proved its capabilities as a dependable and economical unit of transportation.

HOW DO YOU KEEP AUTOMOBILE HOUSE?

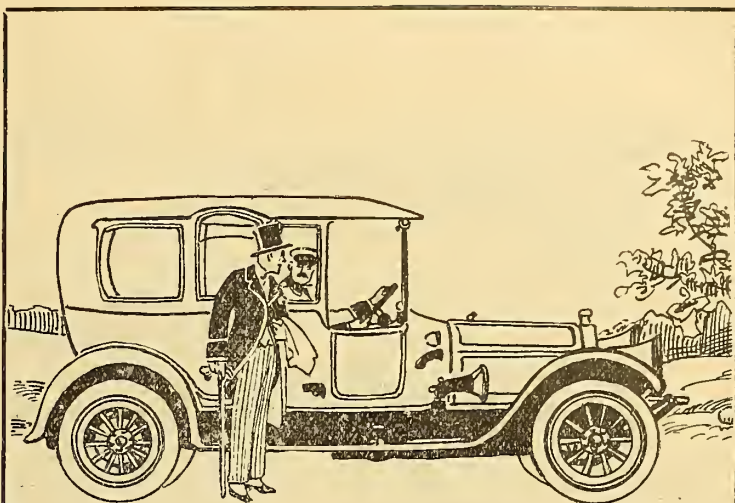
Frequent Motor House Cleaning Is Important in Car's Every-Day Service.

Not enough emphasis has been laid on the motorist's cleaning house—his automobile. I have an old darkey whose method is to sweep litter into a corner, preferably under a couch or behind a door, but anywhere in a pile, "jes' to be handy to take up any time, sah," he explains. But only when extra force is brought to bear on him does he take it up.

So with much automobile house-cleaning, and the force brought to bear is usually an accident. Some motorists are proud of the cleanliness of their cars—most of them, for that matter. They like to see the fenders and bodies well polished and the nicked parts bright and clean. That's what shows, what people looking on admire. Other parts, out of sight, they are lax about. Cleanliness and shine are for the eyes, and the eyes don't see underneath. So it doesn't matter.

So they say, and probably think.

But good automobile housekeeping demands cleanliness that is thorough, and which extends to the nooks and corner under the hood, around the engine, transmission, brakes and other working parts. Doubtless the most neglected part of the average motor car is the drip-pan under the engine. If a little oil is spilled in filling the crankcase, few people will stop to wipe it up. Down it trickles into the drip-pan, the first of a series of such overflows to happen as long as the car is in use. The purpose of the drip-pan is not to catch oil and dirt. It is put there to protect the engine and other working parts from foreign matter that could otherwise get in from below. After the car has been used for several months, considerable oil has probably been allowed to drop into the pan. At first it spreads out in a film over the surface, and in the act of driving dust settles upon this film, changing it to a sticky, non-drying mud, which process continues in spite of the drain hole in the bottom of the pan. The drip-pan should be cleaned as religiously as the rest of the car. Any overflow of oil or gasoline should be wiped up before it gets a chance to run down into the pan. See that the drain hole in the pan is not only stopped up, but has no accumulation around it that will interfere with the free draining of the pan. The easiest and best way to keep the drip-pan and all other parts under the hood clean is to be regular about it. Whenever the car is lubricated or washed, see to it that a little interior cleaning is done as well. Don't permit overflow of oil to go unnoticed. In this way the owner is assured of perfect cleanliness that is not in any sense a detail, but is really important in the everyday service of his car and makes it that much more fireproof.



Mr. ROCKEFELBILT to his CHAUFFEUR:

"Tom, you just wait me at the corner while I drop in the Tobacconist's to purchase a box of the BEAUTY CIGARETTES, otherwise, I may not be able to hold myself till we reach the Club House."

The reply was:

"Yessir, but may I have a smoke on the way, too?"

Nanyang Bros. Tobacco Co., Ltd.

HEAD OFFICE

12, Nanking Road, Shanghai.

MONCHEN-GARAGE

Azabu-Dori, No. 1. Phone 608.

TSINGTAU.

Agents for:—

Scripps-Booth Cars,

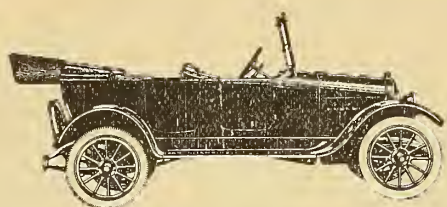
Studebaker Cars,

Stearns Cars,

Savage Tires.

ALL STUDEBAKER CARS

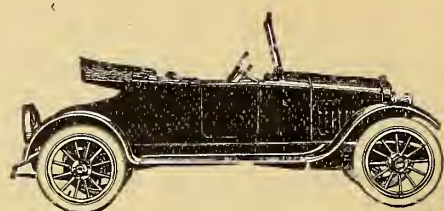
USED ON HIRE SERVICE.



5 Pass. Touring

Maxwell

Tls. 1,000 Tls.



2 Pass. Runabout

EITHER MODEL

Complete with Electric Starting and Lighting

ROOMINESS, plenty of leg room, excellent upholstery—these are the pleasing features of the seating arrangements of the 5-passenger touring car.

THE smart roadster—its body refinements up to date in all respects—has the new and popular "Chummy" seating arrangement.

DONG CHONG BICYCLE Co.

P. 346 NANKING ROAD

SHANGHAI

'PHONE C. 1518



EVANS POWER CYCLES

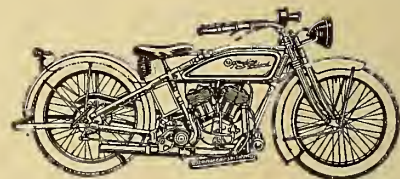
Handy as a Bicycle—Weight 70 lbs.

Easy to handle and control

Efficient as a Motor Cycle

Price Complete Tls. 115.00.

READING STANDARD MOTOR CYCLES



The World's Master Motor Cycle

TWIN MOTOR

16 ACTUAL H.P.

Maximum Power—Tremendous Speed

Model 19-T Price Tls. 330.00.

EXCELSIORS MADE GOOD WITH U. S. ARMY.

The Military Model Motorcycle Came Through Grilling Tests Unscathed and Untouched.

In the United States the feeling exists that if an automobile or motorcycle can pass the tests of the United States Army then there can be no question as to its fitness for civilian use, since it is widely known that the hardest usage possible is that of the military and the most gruelling tests are those of the inspecting officers of the corps. It is this feeling which has given extreme popularity and placed the stamp of approval on the new Excelsior Military Model Motorcycle, Series 19, which is heralded as the ultimate in motorcycle production. The new model is now being demonstrated and sold in Shanghai and China by the American Trading Company, who in addition to their sales force, maintain the services of an expert motorcycle engineer for the convenience of their patrons and in order that they may be advised on the problems of the machine as they present themselves.

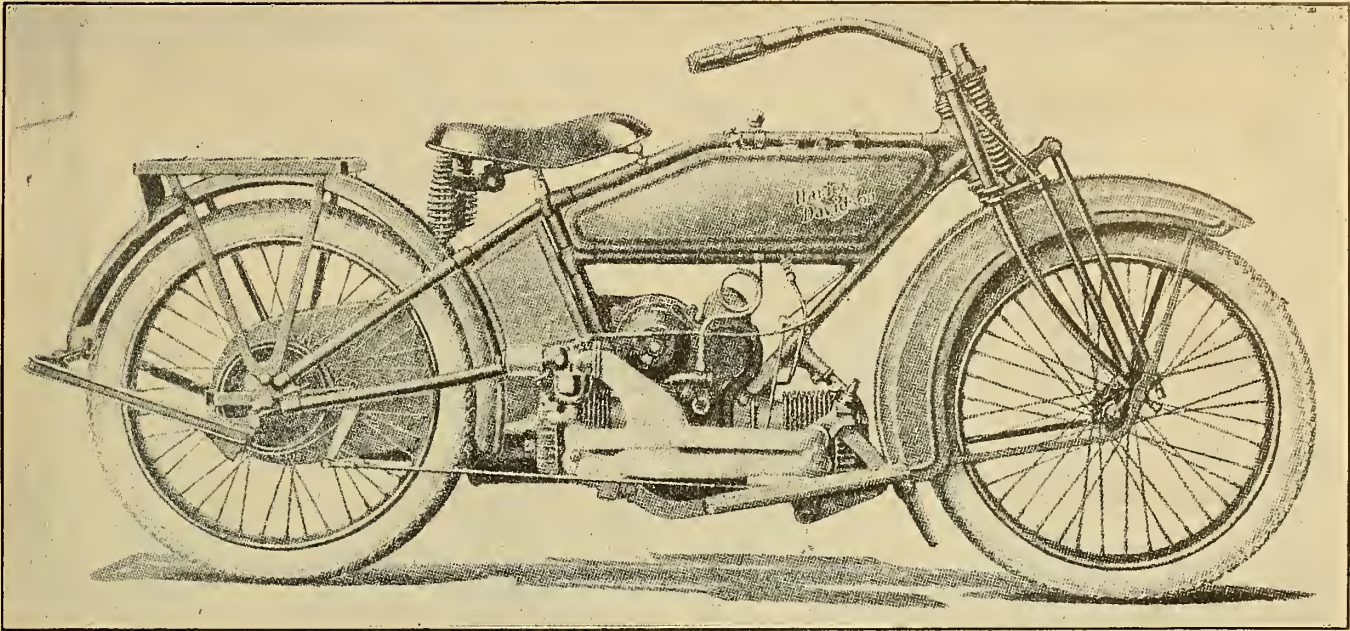
The new machine was built after an investigation which was conducted not only among the ranks of the foremost engineers of America skilled in the manufacture of motor-

cycles but also among those men who knew the cycles by years of use on roads in all parts of the world. After the model had been completed and tried to the satisfaction of the manufacturers, three were sent to the United States Army Testing Station at Matra, Texas, where they not only met with all of the official requirements but accomplished feats supposed to be impossible.

The Military model has the most powerful motorcycle engine ever produced, according to its manufacturers, and the tests of the government. The power is not attained through a multiplicity of valves or complicated mechanism but through mechanically perfect construction, extra large bearings that minimize both friction and wear, and a perfect balance of every moving part.

So great is the power of this motor that at the completion of the two thousand mile government test in the mountainous, desert section of southwestern Texas, during which time there had been absolutely no adjustment or even

HARLEY DAVIDSON SPORT MODEL



Equipped with the new 6 horsepower opposed twin Power Plant, Super-Heated Manifold and enclosed single chain drive leaves nothing to be desired.

Shipment due in March—Book your order NOW.

SQUIRES-BINGHAM Co.

17 NANKING ROAD

Exclusive Agents

SHANGHAI

GOODYEAR SALES.

Goodyear Tire & Rubber Co., Akron, Ohio, U. S. A., reports sales for the year ending October 31, 1919, as totaling \$168,914,000, as compared with \$131,274,382 in the preceding year and net profits subject to Federal taxes of \$23,277,000, against \$15,388,000.

President A. F. Seiberling has set a mark of \$250,000,000 as the goal for company's sales in the coming year, stating that production at the present time is just double what it was a year ago.

examination of the motor, two of the machines were sealed in high gear and sent over one hundred and eight miles of mountain roads with grades as high as forty per cent. The gears were sealed by the army inspecting officers and at the completion of the run were declared intact after an examination by him.

In addition to this run, three Excelsior motorcycles, one with a side car, twice went over a sand road twenty-two and a half miles long that had been declared impossible to any motor driven vehicle except caterpillar tractors, covering this route the first time in two hours and the second in one hour and forty minutes.

Some of the exceptional features of the new machine are: extra large, roller bearing, multiple disc clutch, cushion sprocket, double trussed, military type, front fork, extra wide crown and specially braced for lateral as well as longitudinal strains, inclosed clutch and motor driven chain, removable center bar, handle bar clutch control.

FIRST AUTO SHOW IN AMERICA.

Was Held in Robinson Bros., Circus with the "Side Show" Freaks.

"The first automobile show ever held in the United States consisted of three Haynes cars exhibited by a circus man at a state fair in Columbus, Ohio, in the fall of 1896," says Elwood Haynes, President of The Haynes Automobile Company, Kokomo, Indiana, U. S. A.

Lured by the insidious voice of the barker and the thumping of drums, the curious, unbelieving crowds of merry-makers dropped their dimes into the box at the entrance and passed into the tent where the three "horseless carriages" were being driven around a small circular track. And as the skeptics watched, their eyes grew large and their mouths opened wide with awe and amazement at the sight of a vehicle moving over the ground without any visible means of locomotion.

John Robinson, a circus man, rented the first Haynes for use in a "side show." The experiment proved such a financial success that, upon completion of the second Haynes, it also was rented by Mr. Robinson.

A short time later, when a third car had been built, Mr. Robinson placed the three on exhibition under a more pretentious canvas and charged a nominal admission price. For the use of each car and driver he paid \$150 a month. Thus did the big national automobile shows get their start at a county fair twenty-four years ago.

THE MILITARY EXCELSIOR MODEL 19

THE MOTORCYCLE THAT HAS
ALWAYS MADE GOOD
NOW MADE BETTER THAN EVER

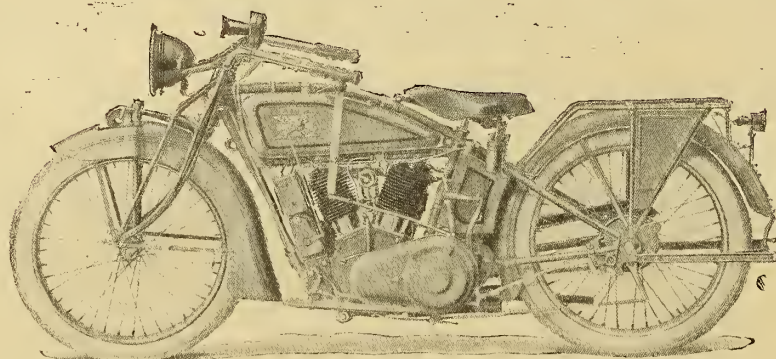


Illustration shows Model 19-E with MIDCO Electric System, including Magneto Generator, Electric Head and Rear Lamps and Electric Horn.

AMERICAN TRADING COMPANY

PEKING TIENTSIN

SHANGHAI

HANKOW HARBIN

Exclusive Distributors for China.

THE EVOLUTION OF THE MOTORCYCLE.

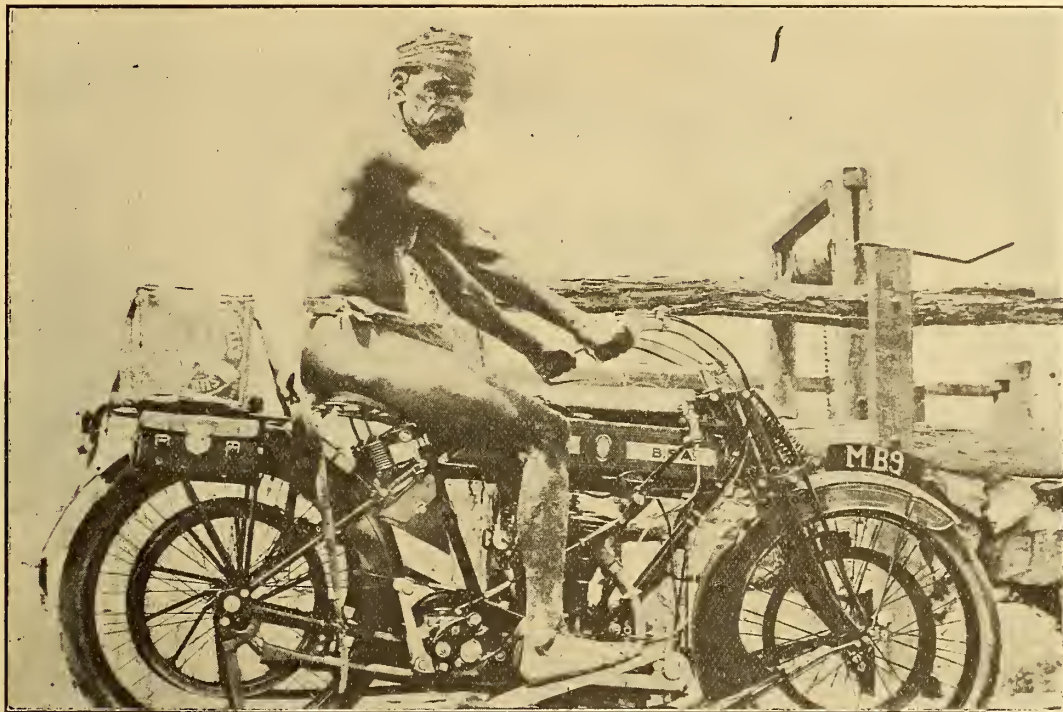
Four Cylinder Models Predicted to Win Increased Favor.

The development of the motorcycle covers the comparatively short span of 34 years, since Daimler first successfully applied the high-speed gasoline engine to a cycle. Crude though this pioneer machine may seem today, it ran, and to a surprising degree embodied features in power plant arrangement and drive to be found in our present machines. Our modern machines are quite perfect, mechanically. Without delving deeply into history, let's review the different steps in motorcycle progress.

The earliest types were practically motorized bicycles. One of the first necessities was reinforcing frames and forks. The early frames were altogether suitable for pedal propulsion, but motor drive involved greater speeds and introduced vibratory stresses. Frames were strengthened, forks reinforced, and rims, tires, spokes and hubs made heavier. Subsequently, at different times, it has been necessary to strengthen frames to provide for more powerful motors which permitted higher speeds and to provide for sidecar service. A few years back, when it was first announced that the big 7-h.p. twins would soon be on the market, rumors were heard that these motors were altogether too powerful and would tear the spokes right out of the drive wheels. This is mentioned merely to show the awe and respect accorded the first of the big twins.

Another vital point in the early days was building more reliability and dependability into the powerplants. The machines could be made to run, but not with any great assurance of continuing for any considerable length of time. Adoption of the magneto was a great step in the right direction. After machines were finally made which would run, and keep running, and would not shake themselves to pieces prematurely, the little matters of comfort and convenience received consideration. Various spring suspensions for the front wheel were devised. Out of all this effort were evolved the types of spring forks in use today. Cushion saddles and spring seat posts also came into use. The controls were simplified, made more effective and convenient. Then came a period of detail refinements. Belt drive was supplanted with the more positive chain transmission. Mechanical oilers appeared, which removed the element of guesswork from the important function of lubrication. Clutches were devised to free the rear wheel. Brakes were gradually made more sturdy and reliable. More rigid and permanent means for securing engines in frames were devised. Carburetors were improved. Valves were made large. The "V" twin became firmly established. Shortly afterwards came another

TAKING FRUIT INTO THE AUSTRALIAN BUSH COUNTRY.



This somewhat handsome gentleman, with the barefoot dancers costume, is a member of one of the native tribes of Australia who has taken quite a fancy to the convenience and pleasure of motor cycling.

important era, the adoption of multi-speed devices. First came the two-speed and then the three-speed gear boxes, with sturdier clutches for sidecar work. Pedals were discontinued and the more convenient kickstarters applied, and with the passing of pedals, footboards became general practice. In proper time, larger tires and greater gasoline and oil carrying capacity came along. Glimpsing into the future reveals no immediate prospect of radical or revolutionary change. The trend nowadays is to build into machines the maximum of sturdiness, reliability and dependability. The sidecar will come into more and more general use. For

solo riding, the new middleweight "Scout" and "Sport" models should be very popular, though many will, no doubt, continue to favor the big twins. The popular four-cylinder models will gain new and enthusiastic adherents. The lightweights will continue to thrive in their particular field. With the almost universal increase in street car fares, bicycles and bicycle motor attachments should be big sellers.

AUTOISTS—LOOK! MOTORLIFE

**SAVES 25% to 50%
GASOLINE**

Use 1 oz. "MOTORLIFE" to 5 gallon Gasolene
Also removes and prevents Carbon

INSURES MOTOR EFFICIENCY

Price **\$2.00** Gold per 32 oz. Tin.

MADE BY

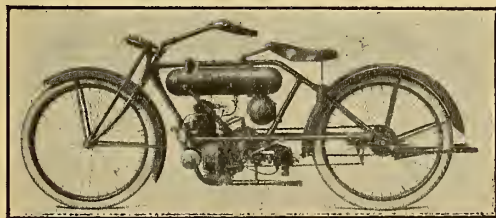
MOTORLIFE MANUFACTURING Co., Memphis, Tenn.

SOLE AGENTS FOR CHINA

THE CHINESE TRADING CO.

10 Ningpo Road, Shanghai.

CLEVELAND LIGHT WEIGHT



**Tls.
180**

2½ H. P. 2-Stroke Motor—Kick Starter
Straight line Worm Drive—Weight 160 lbs.

75 Miles to THE GALLON

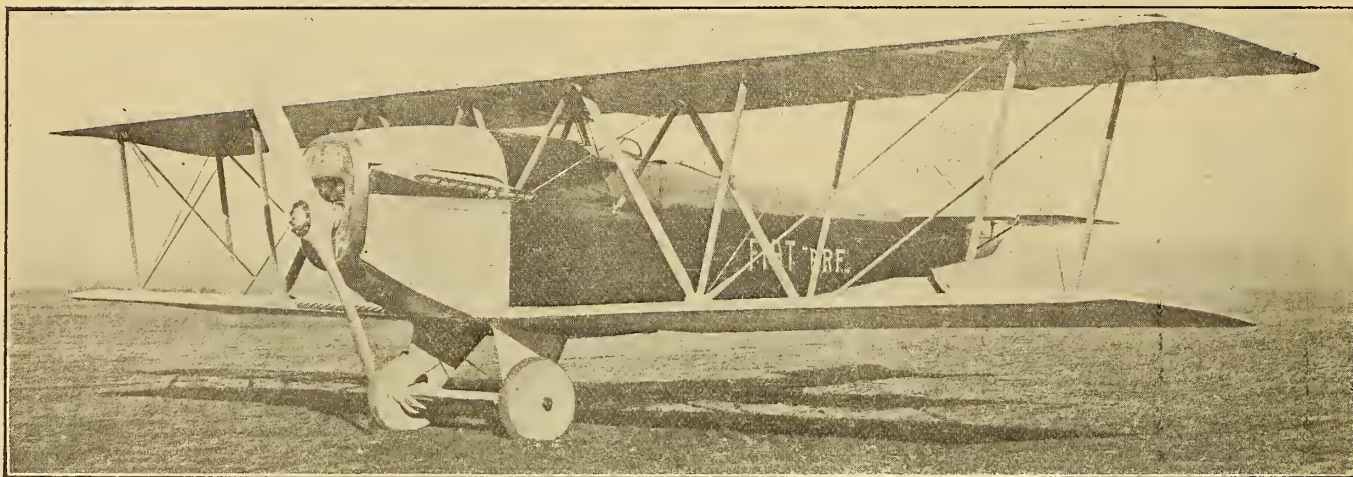
The ideal Machine for Shanghai and Outports

DONG CHONG BICYCLE Co.

P.346 Nanking Road, Shanghai.

NEW FIAT CAN MAKE 2,500 MILE FLIGHT.

Nineteen Hours Needed to Complete Greatest Non-stop Journey.



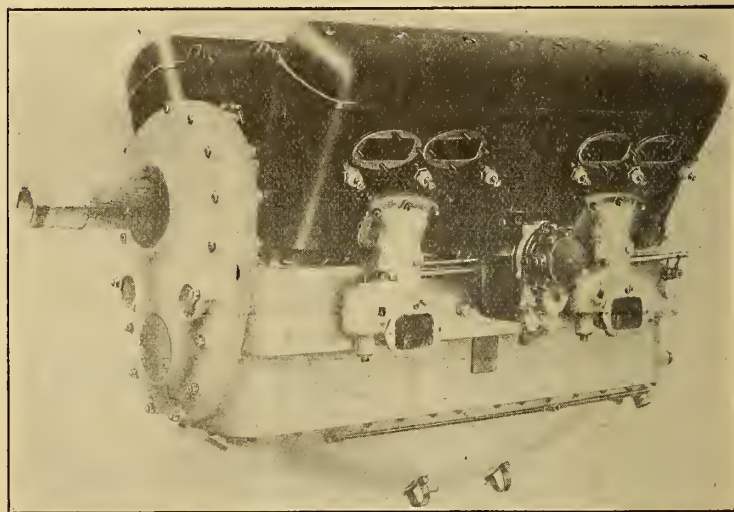
The Fiat A. R. F. Biplane, 700 h.p. Motor, speed 155 m.p.h.

The greatest non-stop flight possible with present airplanes is 2500 miles, which distance can be accomplished in nineteen hours. This sensational performance is well within the capabilities of the new Fiat airplane known as the A.R.F. The machine has a maximum speed of 160 miles an hour with fuel for 20 hours flight, two men aboard, and a small amount of baggage. This gives a theoretical range of action of over 3,000 miles, and making every allowance for unfavorable circumstances, changes in weather conditions which might be met with, etc., it can be calculated that a flight of 19 hours duration can be accomplished and a distance of 2,500 miles covered in that time. This result is arrived at after allowing for a reduction of 8 per cent. on the theoretical speed, and an increase in gasoline consumption of 8 per cent. above the normal. The calculations are made on the speed of the machine at a minimum altitude of 8,000 feet and a maximum of 14,700 feet, the higher altitude being attained after thirteen hours flight. Allowance is also made for the time necessary to attain this altitude.

In ten hours this machine can cover a distance of 1250 miles; in fifteen hours it would be 1950 miles from its starting point; in seventeen hours it would have covered a distance of 2220 miles, and just over 2500 miles at the end of the nineteenth hour.

The A.R.F. is a machine designed specially for long-distance high speed work, and is undoubtedly the most remarkable airplane of its type in existence at the present time. It is driven by a 700 horse-power 12-cylinder Fiat engine with direct mounted propeller. Unloaded the machine weighs 5070 lbs. Its useful load is 5100 lbs., which is composed of 4000 lbs. for gasoline, 440 lbs. for the crew, and 660 lbs. for oil.

The A.R.F. is a biplane with fuselage. The wing spread is 53 feet 2 inches, the overall length is 33 ft. 2 inches, and the height 12 ft. 1-in. The co-efficient of security is $7\frac{1}{2}$ for the fuselage and is not less than $6\frac{1}{2}$ for any part of the machine. The theoretical "plafond" of the plane is 17,800 feet. With a useful load of one ton this airplane can attain an altitude of 9,800 feet in 11 minutes, 13,000 feet in 16 minutes, and 16,400 feet in 24 minutes.



The new Fiat 400 H.P. 12 Cylinder Motor.

An earlier machine on similar lines also designed by Engineer Rosatelli, who is responsible for the Fiat airplanes, has given excellent results on long-distance work in Europe during the past year, one of its flights being a non-stop trip from Turin to London. The A.R.F. will undoubtedly establish some sensational long-distance high speed records in the new year, and it opens up immense possibilities for fast passenger services at high speed and over great distances.

OPENS FIRST AIRPLANE GARAGE.

American Motor Car Dealer Prepares to Take Care of Airmen and Their Needs.

Taking advantage of the opportunity to be the first in the field, J. H. Markle, a motor car dealer of Lincoln, Neb., U. S. A., is erecting an airplane garage.

He has purchased a twenty-acre landing field near his city and will establish permanent storage and service stations. Temporary hangars have been erected and permanent ones will follow in the spring as well as the necessary shops for complete service.

Associated with Markle in his enterprise are two flyers, R. L. Copsey, who was with the American Air Service in France for twenty-two months, and Robert Rawlson, a Canadian ace with eleven Hun machines to his credit.

CROSSING RIGHTS TO AUTOS APPROACHING FROM RIGHT.

At city street crossings where the traffic is not sufficient for the posting of an officer, automobiles approaching each other at right angles frequently encounter a right-of-way problem that may end in an accident. An east-coast city of the United States has simplified the question by giving the privilege of first passage to the car coming from the right. In case of collision, the police take the positions of the two cars as evidence, the one coming from the left being regarded as in the wrong. Police officers in the same city regularly visit the school-rooms and instruct the children in the precautions which rob a street crossing of its dangers.

TO GET LONG MILEAGE FROM TIRES.

"Too often tire manufacturers are blamed for faulty tires, when the fault lies not with the manufacturer of the tires but with the operator of the car," says Mr. T. Kusaka, Factory Representative of the Goodrich Tire and Rubber Co.

"At all times keep sufficient pressure in your tires, as under-inflation means the cutting of the life of your tires in two.

"Try to avoid sharp substances in the road—a small sharp cornered stone will often make a break in the fabric, and a piece of glass will sometimes cut a considerable gash. To avoid all sharp substances is, of course, impossible. However, pains should be taken to avoid as many as you can.

"Always have cuts, bruises, or blisters vulcanized immediately. What today seems to be merely a small cut in a tire soon develops into a blow-out or sand blister. What would cost but a small amount to repair may through neglect mean the utter destruction of a tire.

"Do not jam on your brakes; avoid going around corners at high speed; both mean extra wear and the consequent cutting down of the life of these.

"If you like you can fix most of the small cuts yourself with one of the various small portable vulcanizers now on the



**THE LIGHT
THAT NEUER FAILS
"TECON"
Motor Lamps**

**For every make of car
are obtainable from the
Brilliant Electric Company.**

Consulting engineer and electrical contractor
P564 Nanking Road, Shanghai.
Phone Centra! 4907

A-97

GASTINE

The Gasolene "Economizer"

Positively prevents Carbon formation. The prime cure for motor troubles. Used on all types of gasolene and kerosene engines. It actually increases power, speed and mileage 25 to 40%.



Trade Mark
Reg. U. S. Pat. Off

GASTINE is a gasolene purifier in tablet form.

It not only reduces fuel bills more than 25%, but it assures easier hill climbing, better sparking, faster ignition and prevents back firing.

GASTINE is guaranteed non-injurious and is sold with "MONEY BACK" guarantee.

No motorist can afford to be without it.

Sample box of 100 tablets sent prepaid for **One Dollar**

GASTINE is endorsed and recommended by the National Ford Owners Club (Inc.). New York City, under Certificate No. 878.

THE GASTINE Co., Bridgeton, N. J., U. S. A.

THE CONTINENTAL IMP. & EXP. CO.

Exclusive Agents for China.

15 MUSEUM ROAD

SHANGHAI

Phone C. 3088

market. These cost little and can be used very easily with good success. The book of instructions that comes with each is so explicit and the repairing so simple that no driver has any excuse for not keeping his tires in good repair."

INDEX TO ADVERTISERS

	PAGE
Alliance Assurance Co., Ltd.	36
American Trading Co.	54
Andersen, Meyer & Co., Ltd.	33
Assurance Franco-Asiatique	49
Auto Castle	39
Auto Palace Co.	37
Brilliant Electric Co.	57
Bringewatt, O. E.	27
Burr Photo Co.	58
Central Garage Co.	2nd Cover, 2
China Garage Co.	17, 41
China Oxy-Acetylene Welding Works	49
Chinese Optical Co.	50
Chinese Trading Co.	55
Commercial Transportation Co.	40
Commercial Union Assurance Co., Ltd.	50
Continental Imp. & Exp. Co.	57
Dong Chong Bicycle Co.	52, 55
Dunlop Rubber Co., Ltd.	4
Eastern Garage	45
Excess Insurance Co., Ltd.	4th Cover
Feilung Garage Co.	47
Frame, Leaycraft & Co.	35
Furukawa & Co., Ltd.	25
Gaston, Williams & Wigmore, Inc.	21
General Ac. F. & L. As. Corp., Ltd.	44
Goodrich Co., B. F.	25
Goodyear Tire & Rubber Co.	21
Great Northern Garage Co.	48
Honigsberg & Co., Inc., H. S.,	23, 34
Jardine, Matheson & Co., Ltd.	36
Maurer Co., Inc., Edward	3rd Cover
Mencarini & Co.	1
Monchen Garage, Tsingtau	51
Morimura Garage Co.	38
Nanyang Bros. Tobacco Co.	51
Netherlands Gutta-Percha Co.	48
North Br. & Mercantile Ins. Co., Ltd.	43
Racine Auto Tire Co.	3rd Cover
Sassoon & Co., E. D.	43
Shanghai Automobile Co.	47
Shanghai Garage Co., Ltd.	45
Shanghai Horse Bazaar & Motor Co., Ltd.	44
Sparke, C. E., Insurance	4th Cover
Squires-Bingham Co.	53
Star Garage	45
Thane & Co., A. F.	43
Union Insurance Society of Canton, Ltd.	19
Vacuum Oil Company	4th Cover
Wheelock & Co.	44
Wichita Motor Truck Co.	27
Wong Ah Zai Repair Shops	58
Yangtze Insurance Assn. Ltd.	38

BURR PHOTO Co.

COMMERCIAL PHOTOGRAPHY

AND

PORTRAITURE

KODAKS—FILMS
DEVELOPING & PRINTING

FILMS DEVELOPED
FREE OF CHARGE

PHOTO SUPPLIES AND PICTURE FRAMING.

STUDIO

2 BROADWAY. 'Phone N. 2392.
SHANGHAI.

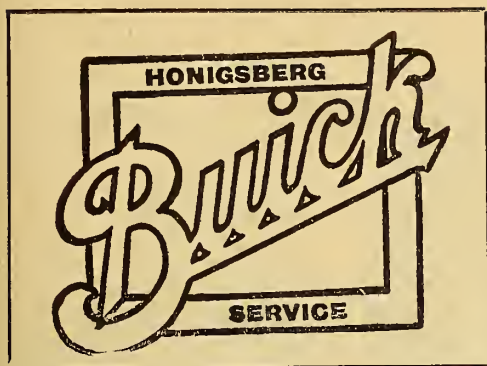
PHOTOGRAPHERS TO
THE ORIENTAL MOTOR

WONG AH ZAI
EXPERT
REPAIRING and OVERHAULING
OF ALL MAKES
MOTOR CARS, MOTOR CYCLES
AND
GASOLINE ENGINES
SHANGHAI.

P.512 N. HONAN ROAD

Phone N. 465

THE SUNDAY ORGAN
FOR
ENGLISH-SPEAKING PEOPLE IN SHANGHAI
IS
"LLOYD'S WEEKLY."
ONLY THREE DOLLARS A YEAR.



HAUL

BY

TRUCK.

COMMONWEALTH

"The Car with a Foundation"
Frame, Leaycraft & Co.
 51a, Kiangse Rd., Shanghai.

GOODRICH TIRES

"Best in the Long Run"

Furukawa & Co., Ltd.

Shanghai, Peking, Tientsin.

WHEN IS A CAR "USED"?

Queries have been received recently by "The Oriental Motor" on the question of when a motor car passes from the category of a new machine to that of a used car. The following correspondence from a recent issue of an American motor publication gives a specific explanation of this question from the standpoint of the United States.

Editor:—January 8, 1919, we received from an automobile manufacturer a standard automobile. February 25, 1919, one of our agents received a bonafide order for this car with a deposit of \$100 and same was invoiced to our customer, being a retail sale. June 7, 1919, the customer who made the deposit of \$100, have failed to take delivery, we sold this car to one of our associate dealers, who in turn sold it to a retail customer of his.

Will you kindly answer the following questions?

1.—When would this car become a used car?

2.—If a retail customer contracted for a certain car, made a deposit on same, applied for his license to operate the car, but never accepted delivery, drove, or rode in the car, would the acts, constituting a valid sale, make a second hand or used car out of this particular car if the car had never been used or driven?

3.—Would a car be considered a new car if it passed from the manufacturer to the distributor, from the distributor to the dealer, from the dealer to the sub-dealer, and so on, always being sold at the wholesale price, until it might finally be sold to the retail customer who becomes the user and driver?—H. O., Hazleton, Pa.

Answer—In my opinion this car would become a used or second-hand car when the customer actually took title to it and it came into his possession. I see no reason why the technical passing of title should make this car a used car. On the other hand, as soon as the customer took possession of it, it became a used car, whether he actually drove it or not.

As per question, I do not believe the acts you mention could cause the car to be legally regarded as a second-hand car. The answer to your third question I believe is undoubtedly "yes."

Always buy your
AUTO SUPPLIES
 at money saving prices

FROM
DONG CHONG BICYCLE Co.
 P 346 Nanking Road, Shanghai.
 Klaxon and Samson Horns also in Stock.

GOOD YEAR
 TIRES
FEI LUNG GARAGE Co.
 H. 153 Hupeh Road, Shanghai.

Just say you "Saw it in the

ORIENTAL MOTOR"

when writing advertisers.

OAKLAND
 "SENSIBLE SIX"
CHINA GARAGE Co.
 21 FOOCHOW ROAD, SHANGHAI.

Firestone
NON-SKID TIRES
CENTRAL GARAGE CO.
 2a, Jinkee Road, Shanghai.

WATCH
THE
ORIENTAL
MOTOR
For 1920

Printed by
 The
Shanghai Mercury, Ltd.
 5, Hongkong Road
SHANGHAI.

BUYERS' REFERENCE GUIDE

The names appearing in this Index are not a part of the advertisers' contract, but are published as a matter of convenience for our readers. The publishers assume no responsibility for errors or omissions.

PLEASURE CARS

	SEE PAGE
Allen, Agents for	2
Anderson,	2
Arrol-Johnston,	44
Austin,	2
Berleit,	44
Briscoe,	37
Buick,	23
Cadillac,	23
Chandler,	45
Chevrolet,	23
Commonwealth,	35
Cunningham,	23
Dodge Brothers,	45
Elgin Six,	47
Fiat,	44
Haynes,	39
Hupmobile,	45
Jordan,	47
Liberty Six,	47
Marmon,	23
Maxwell,	52
Mercer,	2
Milburn Electric,	33
Mitchell,	47
Moon,	45
Oakland,	17
Overland,	1st Cover
Paige,	52
Premier,	45
Scripps-Booth,	44
Spacke,	35
Standard,	45
Stearns,	44
Studebaker,	44
Stutz,	23
Templar,	1st Cover
Willys-Knight,	2

COMMERCIAL CARS—TRUCKS

Bethlehem, Agents for	3rd Cover
Clydesdale,	45
Dart,	23
Defiance,	39
Denby,	45
Duplex,	23
Federal,	2
Garford,	2
Mack,	33
Maxwell,	45
Paige,	52
Republic,	17
Stewart,	23
Thornycroft,	44
Walker Electric,	33
Wichita,	27

USED CARS

Auto Castle	39
-------------------	----

TIRES

	SEE PAGE
Dunlop Agents for	4
Firestone	2
Fisk	45
Goodrich	25-38
Goodyear	21-23-47
Horse Shoe	3rd Cover
Howe	45
Lee	2
Marathon	17
Michelin	37
North British	45
R. O. M.	45
Savage	44
Singapore Rubber Works	48
United States	44

AUTOMOTIVE EQUIPMENT

Auto Castle	39
Central Garage Co.	2
Dong Chong Bicycle Co.	52
Fei Lung Company	47
Honigsberg & Co.	23-24
Shanghai Garage Co., Ltd.	45
Shanghai Horse Bazaar	44

ELECTRICAL ENGINEERS

Andersen, Meyer & Co., Ltd.	33
Auto Palace Company	37
China Garage Co.	17-41
Honigsberg & Co., Inc.	23
Shanghai Horse Bazaar	44
Shanghai Garage Co., Ltd.	45

GARAGES

	Phone
Andersen, Meyer & Co., Ltd. C. 778...	33
Auto Castle	C. 402... 39
Auto Palace	W. 465... 37
Central Garage	C. 3809... 2
China Garage Co.	C. 2403... 17
Eastern Garage	C. 1159... 45
Fei Lung Garage	C. 4133... 47
Gt. Northern Garage Co.	N. 1463... 48
Honigsberg Service	W. 1234... 23
Morimura Garage Co.	N. 2938... 38
Shanghai Automobile Co.	W. 933... 47
Shanghai Horse Bazaar	W. 1641... 44
Star Garage	W. 197... 45
Monchen Garage, Tsingtau... ..	608... 51

GASOLINE ECONOMIZERS

Chinese Trading Co., Inc.	55
Continental I. & E. Co.	57

INSURANCE, MOTOR CAR

	SEE PAGE
Alliance Assurance Co., Ltd.	36
Assurance Franco-Asiatique	49
Commercial Union Assurance Co.	50
Excess Ins. Co., Ltd.	4th Cover
General Ac. F. & L. Assurance Co., Ltd.	44
Jardine, Matheson & Co., Ltd.	36
North Br. & Mercantile Ins. Co., Ltd.	43
Sparke, C. E.	4th Cover
Union Ins. Society of Canton, Ltd.	19
Wheelock & Co.	44
Yangtsze Insurance Assn., Ltd.	38

OILS AND LUBRICANTS

Mencarini & Co.	1
Squires-Bingham Co.	1
Vacuum Oil Co.	4th Cover
Thane & Co., A. F.	43

OPTICAL

Chinese Optical Co.	50
--------------------------	----

REPAIRS AND OVERHAULING

Auto Castle	39
Auto Palace Co.	37
Central Garage Service Station	2
China Garage Co.	17
China Oxy-acetylene Welding Works	49
Fei Lung Company	47
Honigsberg's Service Station	23
Morimura Garage Co.	38
Shanghai Garage Co.	45
Shanghai Horse Bazaar	44
Wong Ah Zai	58

TRUCKING SERVICE

Commercial Transportation Co.	40
C. G. C. Truck Service	17
Central Garage Co.	2

MOTOR CYCLES

B. S. A. Agents for	52
Cleveland,	55
Emblem,	52
Evans Power Cycle,	52
Excelsior,	54
Harley-Davidson,	53
Henderson,	2
Indian,	47
Reading-Standard,	52

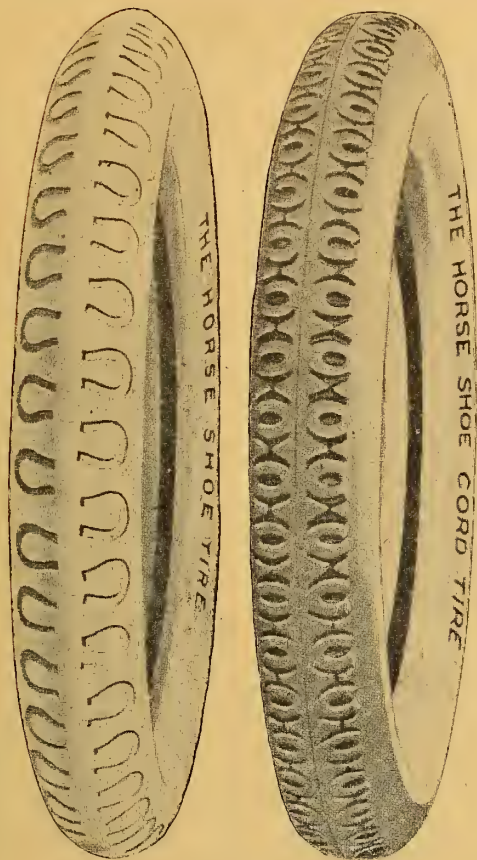
MOTOR CYCLE SUPPLIES

Central Garage Co.	2
Dong Chong Bicycle Co.	52
Squires-Bingham Co.	53

MOTOR CYCLE REPAIRS

Auto Palace Co.	37
Central Garage Service Station	2
Dong Chong Bicycle Co.	52
Fei Lung Company	47
Morimura Garage Co.	38
Star Garage	45
Wong Ah Zai	58

The Horse Shoe Tire



FABRIC AND CORD

AGENTS WANTED

For the well known

Horse Shoe Tires and Tubes

We are appointing Agents in Shanghai,
Hankow, Tientsin, Peking, Dairen,
Hongkong and Manila.

*For full particulars, literature, prices, etc., please
communicate with*

EDWARD MAURER Co., Inc.

7^B Kiangse Road, Shanghai.

Distributors for

RACINE AUTO TIRE Co.

Racine, Wis., U.S.A.



HAUL BY TRUCK

How Crank Case Heat Affects Lubrication

When your car is in action the lubricating oil heats up and thins out.

Its real lubricating value is then put to the test.

Oils not of the highest quality thin out to the danger point and lose their ability to protect the moving parts. The action of the motor is restrained. Destructive friction starts.

Many a motorist owes his repair bill to the failure of his lubricating oil under the heat of service.

The quality of Gargoyle Mobiloils provides in advance for this heat of service. It assures efficient lubrication under the mechanical conditions in each type of motor.

Gargoyle Mobiloils were produced after careful study by an organization recognized as the authoritative leaders in Scientific Lubrication—the Vacuum Oil Company.

By the gallon they cost a little more. But their wearing quality makes them actually lowest in cost per mile—to say nothing of the lengthened life they will give your motor.

Write today for 64 page booklet containing complete discussion of your lubricating problems, list of engine troubles with remedies and complete Chart of Recommendations specifying the grade of Gargoyle Mobiloils that is correct for *your* car.



Mobiloils

A grade for each type of motor.

Vacuum Oil Company

No. 1. The Bund, Shanghai.

X

POLICY

OF

S

MOTOR CAR

INSURANCE

COVERING ALL DAMAGE DONE TO OR BY A CAR

EXCESS INSURANCE Co., Ltd.

ASSETS £2,152,660

PEKING:—CALDBECK, MACGREGOR & Co.,

HANKOW:—A. GROSJEAN & Co.,

TIENTSIN:—WHITAMORE & COMMONS.

General Agent:—C. E. SPARKE, 44, KIANGSE ROAD, SHANGHAI.

THE

ORIENTAL MOTOR

A MONTHLY MAGAZINE DEVOTED TO MOTOR INTERESTS IN THE ORIENT

VOL. I

SHANGHAI, MARCH, 1920.

No. 12



*One of Shanghai's Invitations to Motorists.
Looking out Avenue Joffre from Route Prosper Paris.*

Overland
TRADE MARK REG.

90

**WITHOUT ONCE
SHIFTING GEARS**

4370 MILES

in 7 days and 7 nights

SEALED IN HIGH GEAR

20.6 Miles per Gallon for

4370 Consecutive Miles

THAT is a record-breaking performance of a Model 90 Overland Motor Car. For economical long-time fuel consumption, this record—recently made in a test conducted in the state of Oklahoma, U.S.A., is unapproached.

And the fact that this mileage was accomplished with gears sealed in “high” and without an engine stop for a solid week (day and night) speaks wonders for the mechanical perfection of the Model 90.

The 175,000 owners of Model 90's are proud of its unfailing performance—proud of its splendid appearance.

And the appreciation of these owners is of far more significance than a recital of specifications. Model 90 will meet your every requirement.

Willys
KNIGHT

**Owners Do Not Wait
While Valves Are Ground**

IT is no wonder the Willys-Knight owner becomes more enthusiastic over his car the *longer* he drives it. The sleeve valve motor *improves with use*, and performs consistently every day. Free from valve grinding and repairs, it is always ready for immediate service. The rigid, dependable chassis and beautiful, durable coach-work complete the full measure of owner satisfaction.

Sole Agents

CENTRAL GARAGE Co.

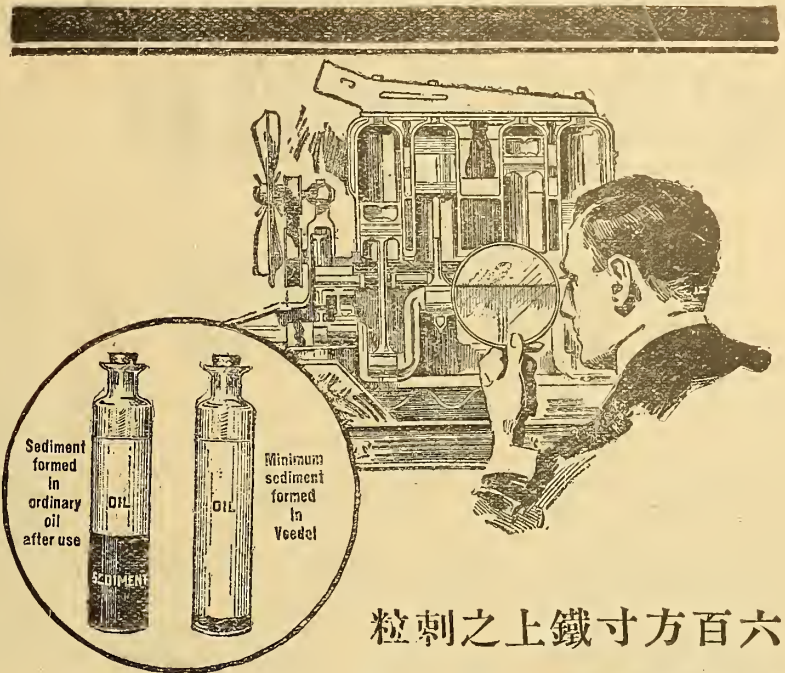
'Phone C. 3809.

SHANGHAI.

2a Jinkee Road.

HAUL BY TRUCK.

This advertisement is published in behalf of the Motor
Trucking interests in Shanghai.



粒刺之上鐵寸方百六

機器車中之引擎，由人目視之，其鐵似甚光滑。然用顯微鏡窺之，則細刺叢生，不知凡幾。如上圖。若敷以最美之油，雖有細刺，仍易轉動。但因其轉動甚速，以致生熱，而其熱能使油變作垢污之狀。由是其鐵顯露刺粒，使機運行遲鈍，而多耗費銀錢矣。所以欲免刺粒顯露，須用善能抵制生熱之油。茲有一種最完美之油，名曰維多油，最能抵制生熱。因其用極靈巧之法所製成。其法西國稱為虎格納，此維多油，能使機中之垢汙減少八分。如上圖右瓶為維多油，左瓶為他種油。其維多油澄底之垢汙，較之他種油澄底之垢汙，祇有百分之二十。然則用維多油運行機器車，豈非省費更多耶？此維多油，分濃淡厚薄四種，每種每聽裝一加倫，價銀一兩七錢二分。另有運動機件上所用之油，每聽一加倫，價銀一兩二錢七分。又有維多油膏六種，三種係杯油膏，三種係石油膏。每聽一磅，價銀三錢五分。由上海及揚子江大埠，綿義洋行獨家經理，零拆處上海南京路十七號時評洋行。

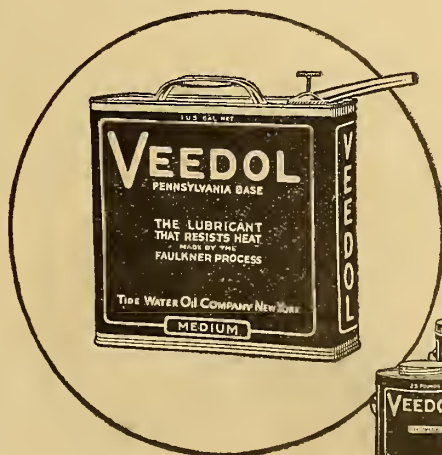
上海九江路
B一號綿義洋行啓

A translation of this advertisement will appear in
the next issue of THE ORIENTAL MOTOR

Sole Agents for Shanghai and Yangtze Ports
MERCARINI & CO.

1B, KIUKIANG ROAD, SHANGHAI.

請用維多
牌機器油
定能使爾
機器靈活
而省費用



RETAIL BY
SQUIRES-BINGHAM CO.

17, Nanking Road, Shanghai.

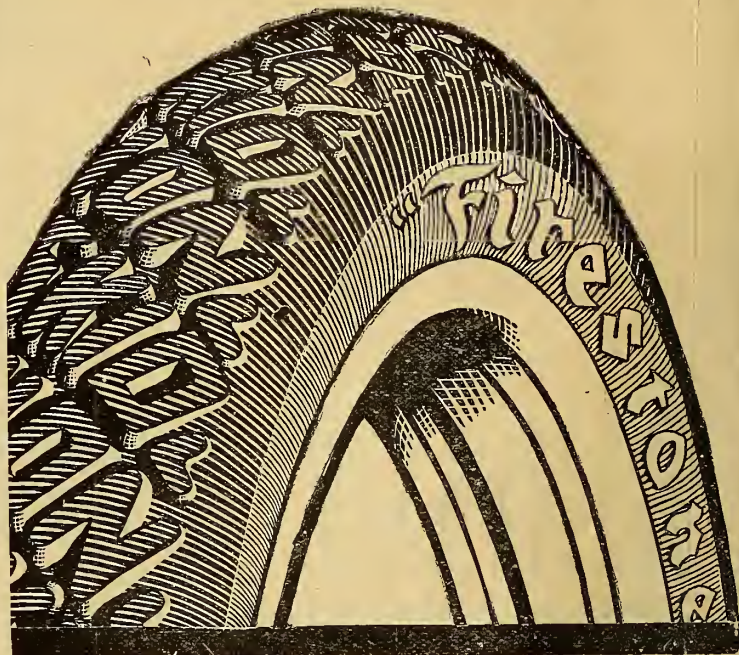


GARFORD TRUCKS

—Low Cost Ton-Mile is the basis upon which the efficiency of Garford performance is proven. Ask any of the numerous users in Shanghai—They know.



That the United States Army has made Garford a Class A standard is another proof of Garford serviceability



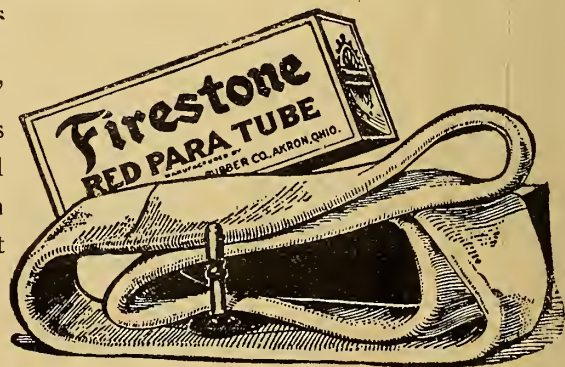
Perfect Service

FIRESTONE equipment insures the efficient, convenient tire service which today's demands on your motor make so important. The saving in mileage and fuel with Firestone Cord Tires is an accepted fact.

Firestone Tires and Tubes

Firestone Cords are so resilient that they give easy riding and spare your car a lot of road-punishment. They are so strong that they give marvelous mileage.

Firestone Tubes are built layer upon layer to a stout thickness and given a "temper" that resists heat and the friction of fast travel.



SOLE AGENTS

CENTRAL GARAGE Co.

2A JINKEE ROAD

SHANGHAI

PHONE: C. 3809

THE ORIENTAL MOTOR

Vol. I.

MARCH, 1920.

No. 12.

A Monthly Magazine devoted to Motor Interests in China and the Far East generally.

Registered at the Chinese Post Office as a Newspaper.

CONTENTS.

	PAGE
Looking At China's Road Future	5
What and Where is That Thing	7
Chicago Show Brings Total Shortage Up	10
China's Airmen to Receive Current Reports	11
The Rising Flood of American Registration	12
Judgement Given Against Garage....	13
Editorial	14
Motorists Have Refused Cheaper Fuels	15
Monogram Oils Locate in China	16
Abolishing The Term "Pleasure Car"	16
Shanghai's New Truck Regulations	18
Air Currents	20
Two Millions are Offered in 1920 Air Prizes....	22
The Little Things About Your Car	24
Notes from Here and There	26
Auto Prices Predicted Higher	28
Latest Specifications of U. S. Gasoline Passenger Cars	30
The Latest British Car Prices	31
Pneumatic Tires Best for Trucks	34
Measuring Gas in Sight	38
Dunlop Announces American Plant	39
Essex Goes Mile A Minute	40
Auto Engines Run Haynes Factory	42
Gear Changing as A Fine Art	44
New Accessories Shop Opens	46
Willys-Overland Invades England	47
Giving Batteries Individual Service	49
Motor Busses for Passenger Service	50
Shanghai Motorcycle Club Formed	52
Gasoline Demand Exceeds Production	54
Firestone to Come to The East	55
First Chinese Government Airplanes	56
Index to Advertisers... ..	58
Buyers Reference Guide	60

Published Monthly by

THE ORIENTAL MOTOR

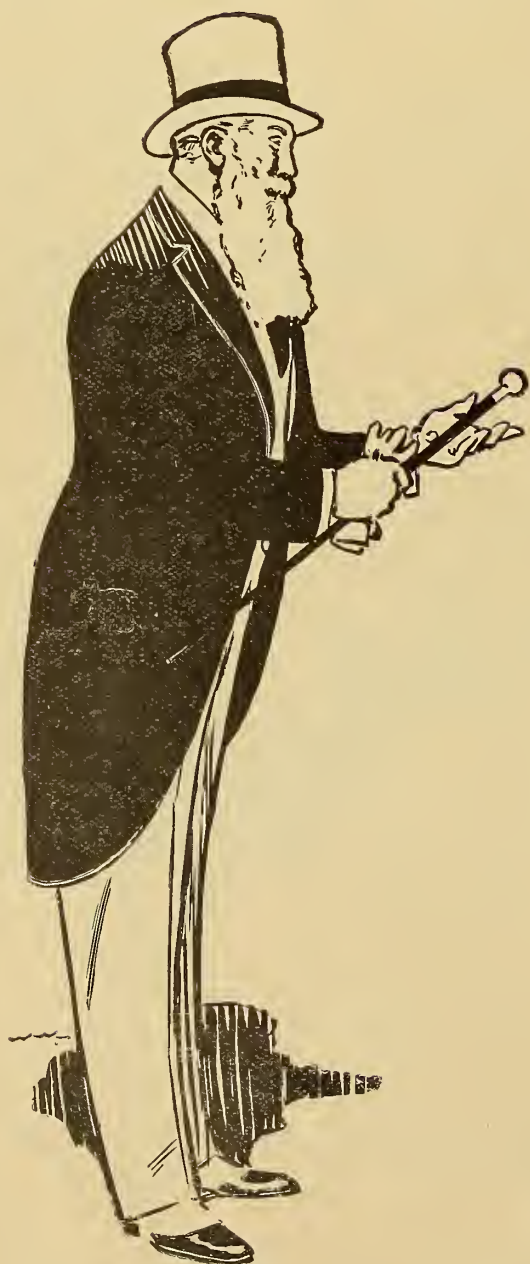
FIVE HONGKONG ROAD, SHANGHAI, CHINA.

Subscription, China and Japan, \$5.00 Mexican. Foreign \$6.00 Mexican.
50 cents Mexican per single copy.



IF

he assures you, in all sincerity that he doesn't know the meaning of tyre worry—if he expresses impatience at the suggestion of such a subject being worthy of serious consideration,—put him down at once as a man whose motoring has been done wholly on Dunlop Tyres.



DUNLOP

RUBBER COMPANY, LIMITED

Founders throughout the world of the
Pneumatic Tyre Industry.

PHONE :

2248. 20 Kiukiang Road, Shanghai.

2073. Dickinson Hall, Tientsin.

2270. E. 3, Tong Chang An Chien, Peking.

CABLE :

"Pneumatic"

"

"

THE ORIENTAL MOTOR

A MONTHLY MAGAZINE DEVOTED TO MOTOR INTERESTS IN CHINA AND THE FAR EAST GENERALLY.

VOL. I.

SHANGHAI, MARCH, 1920.

No. 12.

LOOKING AT CHINA'S ROAD FUTURE.

Highway Engineer and Truck Specialist Sketches Possibilities of Development.

TO THE many persons, especially technical men who know the possibilities of highways and the consequent use of motor trucks as freight and passenger carriers, the virgin opportunity of the country of China for the latest developments in these lines looms up as an epoch making achievement. Although no steps have been taken toward the realization of such a project there are men now in the nation who are bending their energies in works of investigation to see what may be done under present circumstances toward giving the Republic of China a model chain of national highways and the latest means of cross country transportation by the employment of the motor truck.

One such practical dreamer, whose name for various personal reasons will not be herein mentioned, a highway engineer, and a man experienced in the use of motor truck transportation, has outlined for "The Oriental Motor" a national program for road building and the means of making such an achievement possible.

"China above all nations in the world in her present lack of transportation facilities, particularly good roads, offers to the highway engineer the most tempting field for development," he declares. "In no other country on the globe is there such a crying need of a national highway system and in no other country of the world is there apparent such an obvious profitable return on any funds spent for such a project.

"The rich resources of China are lying dormant principally because of a lack of communication with the coastal ports and the interior trade centers. Commerce both in imports and exports in the interior amount to practically nothing in so far as the merchant, either foreign or native, located in the principal trade centers is concerned.

"Now that the war just past has demonstrated the

possibilities of motor truck transportation, there can be no doubt that this is the most logical and economical means of penetrating into the rich trade fields of China, making possible the opening of hundreds of new markets both for the importer on the coast and for merchant inland. We have seen the workings of the motor truck trains in France and the rapidity with which they brought ammunition and supplies from the coast up to the front lines when the means of railway transportation were inadequate and unable to supply the urgent demand. We may see in the future the same hurculean performance made an every day occurrence and a prosaic part of the day's business by the development of a national highway system in the nation of China.

"We will not attempt to outline a network of roads, for that would take too long and would involve too many technical details, nor shall we even attempt to indicate the routes of the main trunk highways for to any one who knows the nation of China, this would be obvious.

"What we shall do, however, is to discuss the means of obtaining the funds necessary to the beginning of such a campaign of road construction. One obstacle stands in the way of any possible development and that is the present division of authorities between the Peking and the Canton governments and the lack of financial standing of the nominal republican government of the country. However, in view of the last American loan and the proposed consortium loan of the Powers, a stabilizing influence may be exerted which will remove this obstacle. Since one of the requirements for the consortium loan is a united China, its conclusion will give a working basis for a road campaign.

"Of all of the propositions advanced for the development of highways, the most feasible with the Northern government in its present financial condition is that of an outside loan. Upon the face of it, the most interested persons in the development of highways in this, the world's most populous nation, are the motor manufacturers, makers

of tires and accessories and other correlated branches of the industry.

"Realizing the potential market offered by this nation with a system of ultra-modern national highways, and the enormous profits to the motor car manufacturers and their



A Motor Truck Ford, Mongolia.

associates, it is the opinion of the most practical that a consortium of American and British manufacturers to advance the necessary funds is the logical solution of the financial end of the development. The motor industry is one of the world's largest and its surplus funds could be utilized in no better way than in such a project. No other promotion work could offer such returns on the capital invested. Of course, there is the problem of having such a loan accepted by the Chinese government and also the additional problem of regulating the expenditure of the capital advanced.

"Regarding the latter, we would say that a board of highway engineers, the best of Europe and America, be employed to make a survey of the nation of China, mapping out the routes and making recommendations as to the means and methods of construction to be used in the various sections of the country.

"After this has been made, the cost of construction, taking into consideration the cheapness of native labor, could be arrived at and that sum offered to the government. Assuming that the loan would be acceptable and sufficient security obtained, the same board could then enter upon the construction keeping it constantly under their supervision

and being assisted by a group of auditors and other assistants in order that every cent of the loan would be put to the use for which it was advanced.

"In consideration of this loan, certain franchises for motor transportation lines, both passenger and freight, could be granted to the syndicate making the loan and upon the completion of the highways, the system could start in full sway, a certain percentage of the returns being applied on the interest of the loan, and another percent on the maintenance of the highway system.

"What such a motor transportation system would be able to accomplish needs no further enlargement for the person who is farsighted enough to realize what this development would mean. It would mean rapid delivery of imports and exports, opening thousands of miles of virgin and untouched territory for foreign and native business, and increasing the number of tourists to the nation because of the opportunities offered for motor tours. It would mean cities of hundreds of thousands where villages of tens of



In the Center of the Gobi Desert.

thousands now stand and a leap of fifty to one hundred years ahead in commerce in the interior.

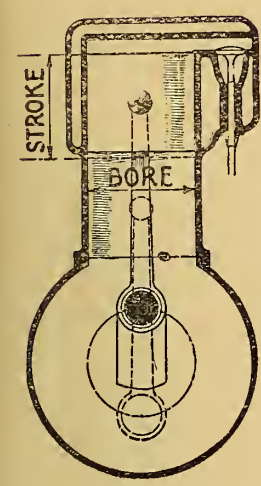
"The transport lines could cooperate with the railways and also with the waterways, thus linking up the three in a great system of commercial arteries.

"There are other developments which could be also outlined at length, but these would vary according to the practical vision of the person making them, so need not be recorded here."



WHAT AND WHERE IS THAT THING?

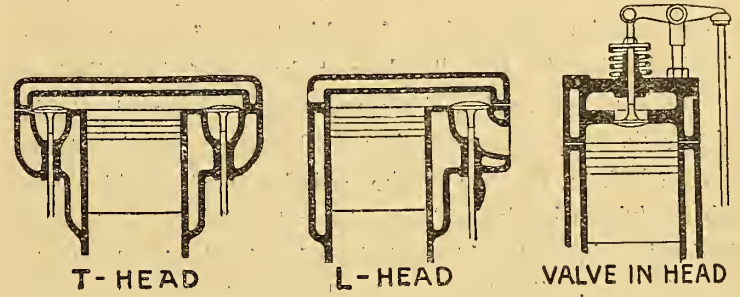
Being a Simple Explanation of the Various Mechanical Parts of a Motor Car.



To talk of an L-head motor, a hot spot manifold or a thermo-syphon cooling system brings no definite image or understanding to the mind of the average motor car owner in China. He buys a machine for its body lines, the fact that a friend has probably had excellent service from a car of the same manufacture, or the reputation enjoyed and made public by the manufacturers themselves. Motor car anatomy means less to him than the anatomy of a jelly fish and motor car tables of specification might as well be a chapter in Latin from Virgil's Aeneid.

If tables of specifications are used understandingly they will present to the mind of the reader a clearer picture of the important and striking points of the anatomy of each motor car than could be had by an inspection of the cars themselves.

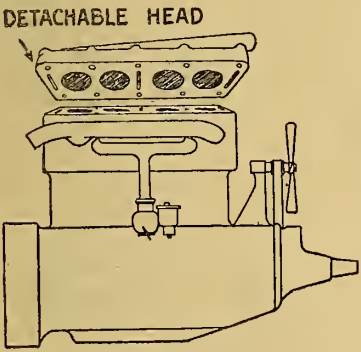
The mind of the salesman does not react fast enough to have at the end of his tongue vital characteristics and dimensions which are given in the tables, and these tabulations include features which, although of interest and value to the user, are frequently omitted from publicity literature.



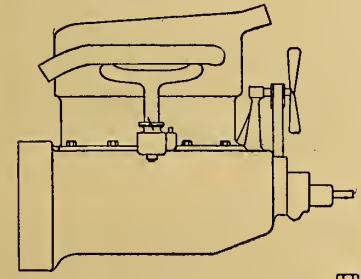
A clearing up of these tables is given below in a few simple and well chosen words which will lead the motor owner and purchaser to a more accurate knowledge of the different integral parts and systems of an automobile :

BORE AND STROKE.

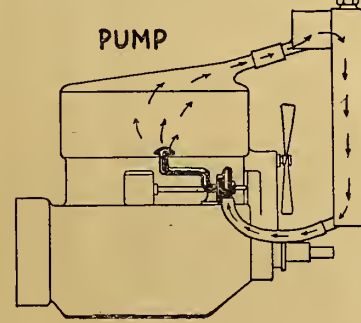
The terms bore and stroke are always used to express the size of an engine, the bore, which is mentioned first



DETACHABLE HEAD



INTEGRAL HEAD



PUMP

always, being the inside diameter of the cylinder, and the stroke referring to the total travel of the piston from the top to the bottom of its stroke. Thus the figures 3 by 5 refer to an engine having a bore of three inches and a stroke of five inches.

PISTON DISPLACEMENT.

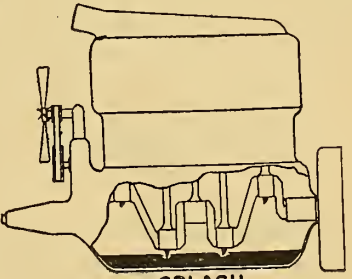
The cubic capacity of the engine is obtained from the bore and stroke, which is commonly referred to as piston displacement. The figures in any table under this head are obtained from the formulae $D \times .7854 \times N \times S$, in which D is the bore, N the number of cylinders and S the stroke.

CYLINDER CASTINGS.

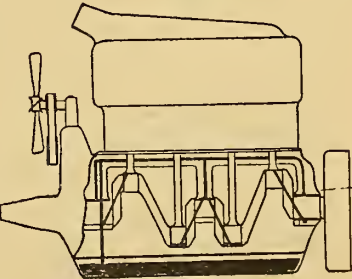
The cylinders of engines are cast from a variety of metals and the design can call for their casting in units or in groups of two, three, four or six. A block casting is one in which all of the cylinders are cast in one block. In the case of eight and twelve cylinder motors it is customary to cast their cylinders in blocks of four and six respectively. In a number of cases the upper half of the crank-case is now cast integrally with the cylinder block.

DETACHABLE CYLINDER HEAD.

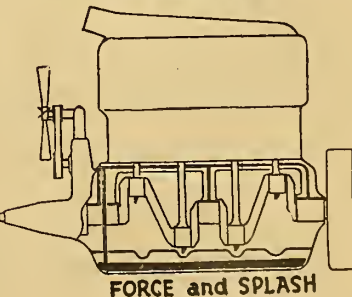
As its name implies the cylinder head is the top or head of the cylinder and it may be cast integrally with it or in the form of a separate piece bolted on.



SPLASH



FORCE FEED



FORCE and SPLASH

VALVE LOCATION.

The valves of a gasoline engine are the parts which control the time of entrance of fresh gas and the time of leaving of burned gas. The words side, opposite, head and sleeve are used to designate the location of the valves. With the exception of the last named, the words give definite location to the valve and at the same time indicate the cylinder employed. The majority of the cars of today employ an L-head motor, a type in which all the valves are on the same side and are driven from one camshaft. A few still employ the T-head type, so-called from the resemblance of a sectional view of this type of cylinder to the letter T, wherein the valves are on opposite sides of the cylinder. Two camshafts are required for this type of motor. The valve-in-head motor has all valves at the top of the cylinders and are inverted so that the stems point upward. This design calls for a valve operating mechanism extending from the camshaft to the top of the cylinder head outside the engine. There is also a form of construction wherein one set of valves is at the side and the other in the head. This has cylinders similar to the L-head motor in that all of the valves are driven from one camshaft, but it is referred to as the side and head (S and H) type. The sleeve-valve engine is in a class by itself since the valves are in reality ports cut in a sliding sleeve.

CAMSHAFT DRIVE.

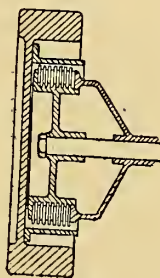
The camshaft or half-time shaft which operates the valve must be driven by the crankshaft and is usually connected to it by a gear or chain. Today the standard camshaft gearing is the helical in which the teeth are scattered and slightly curved. Another type of gearing is the spur, wherein the teeth are straight and at right angles to the side of the gear.

In some construction a silent chain is used instead of gearing.

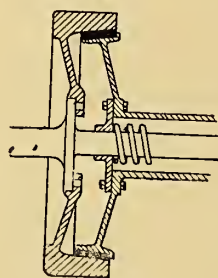
VALVE MATERIAL.

Where the information is available there has been given under this heading the kind of the material of the valve head. Many valves are built with cast iron heads welded to steel stems but in some the employment of special steel alloys such as tungsten, nickle, and chrome vanadium is preferred.

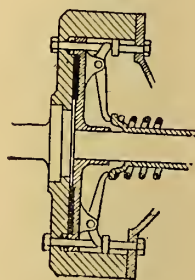
DISC



CONE



PLATE



PISTON RINGS.

In order to retain the compression of the cylinders, the pistons must be packed, and this is done by the employment of piston rings, which are springy pieces of steel mounted in grooves in the piston. The common type of ring is known as the diagonally split in which the ends are cut at an angle of 45 degrees to the periphery. The step-joint ring has two separate cuts at right angles to the periphery and another cut connecting these two. In addition to these two standard types the tables also refer by name to specially made piston rings. In nearly every instance the number of rings employed per piston is given.

CRANKSHAFT BEARINGS.

The crankshaft is that part of the engines anatomy which weights are employed on the crank arms to offset or a rotary motion. It is supported in the crankcase by bearings which vary in number according to the design. Two bearings, one at each end of the motor, may be employed, or the shaft may be supported by a third bearing in the middle, or by bearings placed between each two crank arms.

COUNTERWEIGHTS.

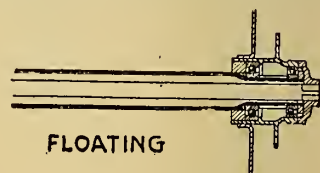
Some crankshafts are of the counter balance type in which weights are employed on the crank arms to offset or counter balance certain forces which tend to distort the shaft and set up undue vibration.

DRILLED CRANKSHAFTS.

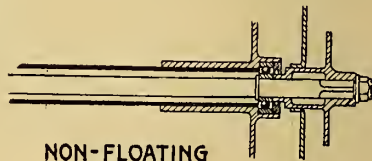
In certain types of lubricating systems the crankshaft is drilled in order to make a passage through which the oil is forced directly to the main and connecting rod bearings.

COOLING SYSTEMS.

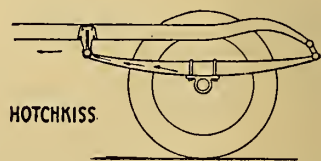
The three types of cooling systems in use in automobile motors are the pump, the thermo-syphon, and the air. In the pump system a centrifugal pump operated by the engine



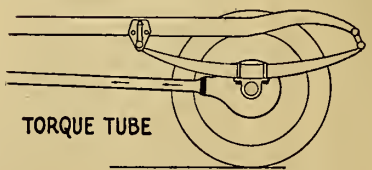
FLOATING



NON-FLOATING



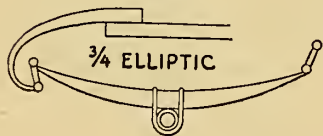
HOTCHKISS



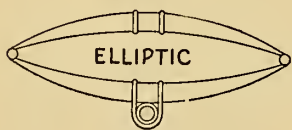
TORQUE TUBE



SEMI-ELLIPTIC



3/4 ELLIPTIC



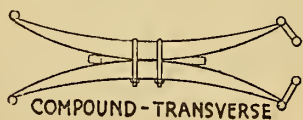
ELLIPTIC



CANTILEVER

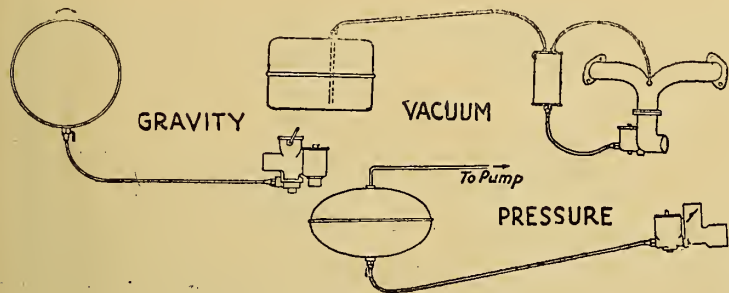


TRANSVERSE



COMPOUND-TRANSVERSE

itself forces the cooling water through the water jackets and radiator. No pump is used in the thermo-syphon system but the water circulates from the jackets to radiator, nevertheless, in accordance with physical law that hot water, being lighter than cold, rises to the top. In the air cooling system the cylinders are cooled by forcing drafted air around them, and they are finned so that the heat may be quickly dissipated.



FUEL FEED.

Of the three types of fuel feed in use, two--the pressure and the gravity--are self-explanatory. The success of the pressure feed is dependent upon the air tightness of all parts of the tank and fuel lines. The vacuum feed type, which is ever growing more popular, employs what is known as the vacuum tank having three pipes leading from it. One these leads to the main tank, one to the carbureter and one to the inlet manifold. The vacuum in the inlet manifold is communicated to the tank, and the vacuum existing there is destroyed by the incoming fuel from the main tank, which then flows by gravity to the carbureter.

ENGINE LUBRICATION.

The most simple type of oiling system is the splash, in which oil in the bottom of the crankcase is splashed against the cylinder walls and bearings by scoops at the lower end of the connecting rods. An improved type of this system is the circulating splash employing a pump. Some of the oil is directed to various parts of the motor but not under pressure. The force-feed and splash system consists of a pump operated by the engine which forces the oil under pressure to the crankshaft bearings and timing gears, but leaves the cylinders and pistons to be oiled by splash of spray. Where force-feed is employed every working surface is oiled under pressure and there is no splash whatever.

CHASSIS LUBRICATION.

Under this head the number of oil and grease cups employed to lubricate the chassis of the various cars is indicated.

HOT SPOT.

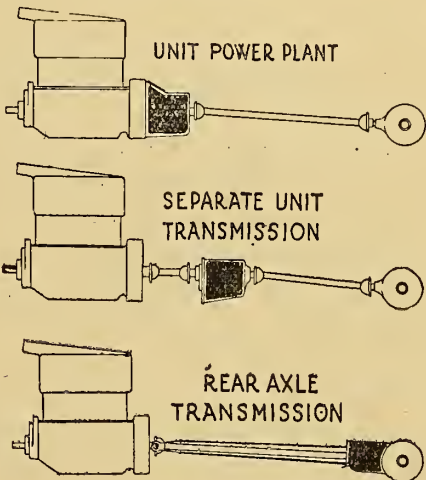
The familiar term Hot-spot refers to a specially heated area in the intake manifold so that the ingoing gas upon striking this area becomes more fully vaporized. In the tables hot-spots are included with hot-backs and heated manifolds under the same heads.

CLUTCHES.

The three types of clutches in common use are called the cone, the plate and the disc. The cone type consists simply of a truncated cone faced with leather or asbestos fabric fits into a similar shaped opening in the fly wheel. The disc clutch has two sets of discs, one driven and the other driving. The former is flexibly attached to the clutch shaft, and the latter to a drum fastened to the fly wheel. In the plate clutch two or three large discs or rings are used instead of the multiplicity of small discs. The constructional principle of the plate and disc clutches is the same, the detail differing.

TRANSMISSION.

With one or two exceptions the selective type of transmission is universally used today. With it the driver may shift his gears from one speed to any other without running through intermediate steps. In other words, he selects any desired gear combination. This unit may be bolted to the fly wheel housing, mounted as a separate unit, or incorporated with the rear axle housing. When bolted to the engine the combination of engine, clutch, and transmission is known as a unit power plant.



UNIVERSAL JOINTS.

A universal joint is a flexible connection between two shafts whereby one may drive the other, although they are not in line. The figures in this column indicate whether one or two joints are used.

AXLE TYPES.

There are three types of rear axles mentioned in the specifications: floating, semi-floating and three-quarter floating. In the floating axle the shafts do not carry any load and so are said to float. This being the case, it is possible to remove an axle shaft without removing the wheel. In this construction bearings which are on the axle tubes carry the load and the shafts are merely as driving members. In the semi-floating axle on the other hand, the axle shafts are mounted on bearings which are inside the axle tubes and the wheel is mounted on the outer end of each shaft. Thus the shaft must not only drive the wheels but also

(Continued on page 43)

CHICAGO SHOW BRINGS TOTAL SHORTAGE UP.

American Central National Exposition Breaks More Records with Enormous Attendance.

(By An American Correspondent.)

Plainly the effect of the Chicago show will be to add further responsibilities to the burden of the production man at the American factory. That the automobile industry in the U. S. will be oversold during practically the whole of 1920 began to be predicted during the New York show, but was rendered a certainty as the opening days of the big Chicago display began to unfold a further tale of immediate demand, for which there is little prospect of satisfaction for quite a while to come.

In many ways the Chicago show proved a repetition of that at New York, and in many other ways it proved not only a more emphatic disclosure of the present and prospective state of the industry, but also a function more distinctive and essential than ever. The direct selling flavor of the Chicago show was more evident than usual this year, possibly because of conditions surrounding the industry, while the absence from the car makers' stands of the higher executives, in most instances, bespoke a degree of preoccupation that was elsewhere even more evident and more readily explained. The particular force of the present situation naturally tended in some ways to accentuate this aspect of the Chicago events this week. The state of the steel market naturally dominates the production problems at all times, and the very present prospect of a stringency in steel during 1920 justifies a certain amount of anxiety over the maintenance of inventories. Conditions are bad enough just now, what with the usual mid-winter traffic delays, plus the backwardness of the steel mills, plus the urgency of automobile demand, plus the ambitions of so many manufacturers to swell their outputs this year. Therefore there was the utmost interest and discussion bearing on manufacturing problems, more, as it seemed to some observers, than usual by a great deal. A new phase is the appearance of budding parts and accessory concerns. It is the custom for the wise man, having a new product to introduce to the trade, to take a roll of blue prints, a model or two or some samples to his hotel during the show, there to make himself known to the favored few and use his best influence to secure the tactical advantage of just the right presentation to exactly the right people. This old custom is still in vogue, but it is observable that the welcome accorded these newcomers, whether they are offering new axles, clutches, tops or certain other components, or whether they promise new devices that will materially aid in the selling of another year's output, is warmer and more sincere than ever before. Attendance at the show was big, probably bigger than at any previous show. Such, at least, was the report of the local newspaper men, most of whom have thus far survived the nineteen shows that have been

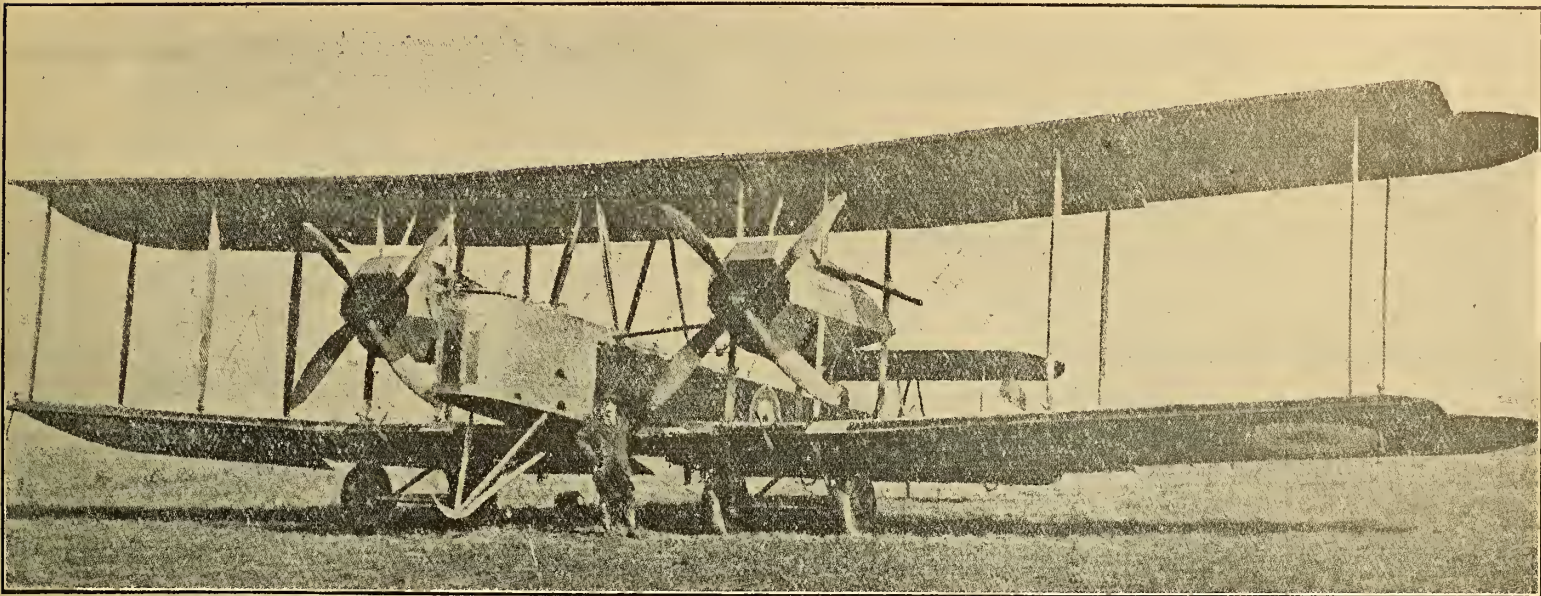
thus far held, and give every evidence of being able to survive the present season. It may or may not have been previously remarked in so many words that the prevailing note of 1920 design is increased definiteness of what can be very properly termed the master lines of the car. Quite apart from the outline of the body and such distinctive elements as the combination of mud guards and running boards, the design is emphasized by the treatment of frame line, side rail, hood corners and so on. The aim of the designer now is to make these distinctive factors in the picture more emphatic than ever before. How this has been accomplished in different instances, forms the basis of an interesting study.

For example the new Premier is closely patterned after its predecessor insofar as general proportions and general identity are concerned. On the other hand it is a far better accented design, to employ the artistic phrase, and by reason of its distinctive qualities will probably prove a good deal more pleasing to the public. Accomplishment of the change has been wrought by the adoption of a new form of curved edge, in place of the plain bevel, and by carrying the molding line clear around the front of the radiator in the form of a sharp edge, where formerly there was a smoothly rounded curve. At the New York show was shown, among others, the new postwar Fiat display, but the exhibits arrived late and the majority of the trade had not seen these importations until the Chicago show opened. They are two in number—out of a total of three chassis and ten body styles now being made in Italy, by the way, and all of postwar development. One is a large and striking-looking car of the conventional appearance peculiar to its line. The other is in reality a "baby" car, though giving no such impression when viewed close up. It is that unusual, but always attractive proposition, a fine little car. That is to say, in design, workmanship and materials throughout, it possesses all the qualifications that would naturally be expected of a Fiat, save that it is small. These qualifications go all the way through from the splendid finish of the tiny 2-1/16 x 3-3/16-inch four-cylinder block engine, to the four-speed gear-set or the roll-topped and tightly stretched, tuftless leather upholstery. The tread is 48 inches. Duty paid and including all other charges, the car sells in Chicago for \$2,731 with the four-passenger touring body shown.

There are four models in the new Briscoe line, including the new sedan, which is of substantial aspect and finished in good taste. The chassis has numerous points of mechanical interest in the direction of weight saving. Among these may be mentioned the frame, which is of deep section, thin-drawn stock, but cleverly contrived for rigidity.

(Continued Page 37)

THE LATEST AIR CONQUEROR.



The Vickers-Vimy Eagle, which carried Capt. Ross Smith and his three aides successfully from London, England, to Port Darwin, Australia, in Twenty-eight Days.

CHINA'S AIRMEN TO RECEIVE CURRENT REPORTS.

Zi-ka-wei Observatory to Furnish Atmospheric Data by Means of French Wireless.

"The time appears to have come to start a service of information for the sailors of the atmospheric ocean," is the statement made by Father L. Froc, S. J., director of the Zi-ka-wei Observatory in announcing the inauguration of a daily report of air conditions for the benefit of China's airmen. The service was begun on March the first, the signals being transmitted by the French Koukaza (Shanghai) wireless station.

"The air service will soon be established in the Far East: local firms and even the governments are taking steps in that way; and the active propaganda of the 'Federation Aeronautique Internationale,' under such men as Comodoro de Beaumont and Major Charles J. Glidden, will certainly advance the date of its opening," Father Froc declares.

"With a view to answering the new want, the Zi-ka-wei Observatory will begin at once to give such data as are available for the present. The new information will be forwarded by means of wireless signals, with the assent of the authorities concerned, who have kindly agreed to it.

"These will be embodied in the wireless warnings sent every day, by the Koukaza Station, at 11 a.m. and 5 p.m. respectively, just after the triple signal of time. They will be announced by the words "Air currents." Then the three words High, Mean and Low, each followed by a direction shown by a point of the compass, thus: 'High W.N.W.; Mean, N.E.; Low, S.E.' and so on. Thus will be indicated the great motions of the mass of the at-

mosphere, deduced from the movements of the clouds observed a short time before sending the message.

"The 'high' level is shown by the drifting Cirrus, etc., which, according to the 'Dictionnaire des Sciences,' are floating between 6,000 and 15,000 metres (19,600 to 49,000 feet); the mean level chiefly by the Alto-cumulus, between 2,500 and 5,500 metres (8,200 to 18,000 feet); the 'low' level by the other clouds (Cumulus, etc.) between 500 and 2,000 metres (1,600 to 6,500 feet). We must content ourselves with that approximation, for the present.

"The points of the compass, N., NNE., NE., etc. are those from which the clouds and the currents carrying them are flowing. If the directions cannot be stated, for want of clouds or for other reasons, the words 'high,' etc. will be followed by the word 'nil' or something equivalent. —If two or more directions are indicated for one level, it will mean that there are superposed layers of clouds of different motions, the higher being named the first, and so on.

"It is needless to say that such information will be very important, imperfect as it may be, not only to aviators, but also to navigators, during the Typhoon season, to arrive to very suggestive conclusions concerning the bearing and motion of those dreaded phenomena, provided a sufficient knowledge of the theory of cyclones is possessed. The actual service is a first step that may be followed by others and improved according to the circumstances."

THE RISING FLOOD OF AMERICAN REGISTRATION.

Motor Vehicles in Use in the Various States Achieve New Records During 1919.

In spite of the manufacturing stagnation caused by the war, in spite of strikes and lockouts and industrial unrest, the motor car population of the United States continues to grow in leaps and bounds. On November 1, 1919, the motor population of the country was 7,412,047. On this first of January the officials of the various states estimated that the number had reached 7,691,523. In the face of these impressive totals, we may be pardoned for pausing a moment in contemplation.

The latest government figures available indicate that there are approximately 27,000,000 families in America. Taking the 7,691,523 motor vehicles of the U. S. as the basis of a comparison, we find that there is a motor car of some sort for every three and a half families. A philosopher might find a pregnant text in the effect on the mind, morals and manners of the virtuously thirsty population of the U. S. of this possession of a travel means by every third family in the land. No other nation has ever approached this almost universal transportation system.

The second interesting thought brought out by the figures is the fact that there is now a motor car for each 15.96 persons in the United States. And remarkable as this average is for a nation of 110,000,000 people, it is still more remarkable that four of the states can now carry, or could if necessity arose, their entire populations in their own motor vehicles. These happy commonwealths are Iowa, where there is a car for each 6.09 inhabitants; California, with a car for each 6.20 Golden Staters; Nebraska, with a car for each 6.43 of its people, and South Dakota, with one for every seven residents, big and little. Until this year Iowa and Nebraska have been the only two states in this mystic circle. Now California horns her way in and usurps second place, and we refuse to wager anything that the Golden State will not take the lead in her own good time. And finally South Dakota breaks into the select company with a batting average of seven.

The gains in motor population have not been confined to the leaders, for even the most backward states are showing commendable advances. The tail end state is Mississippi, which has one car for each 40.02 people. This looks rather hopeless, but ponder the following: Great Britain, which is America's nearest rival in possession of numbers of motor vehicles has one car to approximately each eighty inhabitants. So do not point the finger of scorn at Mississippi, where absence of roads and a disproportionately large indigent colored population make it difficult to achieve general distribution of so expensive a necessity as motor cars.

Registrations by States.

State.	Registration		Estimated registration		People per car.
	Nov. 1, 1919.	Indicated in thousands.	Jan. 1, 1920.	Indicated in thousands.	
Alabama	60	65	36.84
Arizona...	28	29	9.38
Arkansas	49	58	30.57
California	445	500	6.20
Colorado	102	104	9.75
Connecticut	100	103	12.77
Delaware	16	16	13.39
District of Columbia	45	46	8.00
Florida...	56	59	15.91
Georgia...	125	126	23.29
Idaho...	41	42	10.86
Illinois...	475	478	13.21
Indiana...	226	277	10.30
Iowa...	356	365	6.09
Kansas...	222	226	8.27
Kentucky	80	80	29.78
Louisiana	49	50	37.69
Maine...	53	55	14.22
Maryland	99	101	13.70
Massachusetts...	241	245	15.64
Michigan	321	333	9.41
Minnesota	256	260	9.02
Mississippi	47	50	40.02
Missouri	238	246	14.01
Montana	59	59	8.17
Nebraska	199	200	6.43
Nevada...	9	9	12.07
New Hampshire	29	30	14.87
New Jersey	185	190	16.21
New Mexico	17	18	24.27
New York	549	600	17.74
North Carolina...	102	111	22.21
North Dakota	82	82	9.54
Ohio...	505	510	10.33
Oklahoma	145	150	15.85
Oregon...	82	83	10.65
Pennsylvania	485	493	17.84
Rhode Island	38	39	16.26
South Carolina...	67	70	23.72
South Dakota	104	105	7.00
Tennessee	83	84	27.63
Texas...	314	320	14.37
Utah...	34	35	12.88
Vermont	26	26	13.61
Virginia...	93	94	23.76
Washington	159	163	10.13
West Virginia	49	50	28.66
Wisconsin	225	226	11.30
Wyoming	21	22	8.46
TOTALS...			7,412	7,691	

IMPROVING BUBBLING WELL ROAD, SHANGHAI.



Bubbling Well Road is the principal motor highway of Shanghai. The road is now being widened at the Country Club and also at the terminus at Rue de Say Zoong, which will give increased comfort and safety to motorists.

Another very interesting field of speculation is opened up by segregating the averages in sectional groups. Considered in this way the Pacific Coast states, California, Oregon and Washington, make the best showing, their general average working out at 8.99 inhabitants to each car. The Middle West makes the next best showing, placing in this group Illinois, Indiana, Iowa, Kansas, Nebraska, Oklahoma, Michigan, Missouri and Ohio. The average for these nine states is 10.43 persons to each motor vehicle.

The third group is not the great eastern population area, but the mountain states of the West, including Colorado, Idaho, Nevada, Utah and Wyoming. These five states of comparatively sparse population and magnificent distances have a general average of 10.80 persons per car.

Next comes the eastern group, in which is included Connecticut, Rhode Island, Massachusetts, Maine, New Hampshire, Vermont—New England in other words—and in addition New York, New Jersey and Pennsylvania, which rightfully belong in the same motoring class. These nine states show a batting average of 15.46, which is good considering the masses of population and the great cities within the territory, motor vehicle registration invariably falling in the larger places.

The last natural group comprises the far Southern states, Alabama, Florida, Georgia, Louisiana, Mississippi, Texas and Arkansas. The general average for these seven commonwealths is 26.95 inhabitants per car. The reason for this is obvious. The Southern states have a very heavy colored population, which is not financially prosperous.

However, wartime cotton prices have served to bring prosperity to this section and the effect will undoubtedly be seen in the motor car distribution figures for many years to come.

From all of this it becomes apparent that the time is not very distant when the United States will be able to take all of its 110,000,000 people riding in its own motor vehicles. And that will be the most remarkable example of universal transportation ever presented for the wonderment of the well known human race.

JUDGEMENT GIVEN AGAINST GARAGE.

British Court of Shanghai Holds Taxi Operators Responsible for Accidents.

Judgement for injuries sustained while riding in a hire car of which the chauffeur lost control was granted to G. A. Turner and Mrs. Turner, by Judge Sir Havilland de Sausmarez in the British Court of Shanghai recently, in a case against the Shanghai Garage Company, Ltd. The case was the first of its type and was closely watched for future precedence.

Counsel for the motor company brought into court chits for the car upon which were printed the statement that the company was not responsible for accidents, but their contention was not allowed by the judge.

The damage awarded totalled Tls. 2,000 to the plaintiffs and \$400 to a Chinese boy, in the employ of the plaintiffs, who was also a passenger in the car and who brought a second suit.

The Oriental Motor

A Monthly Publication Devoted to Motor Interests in China and the Far East Generally.

PUBLISHED AT FIVE HONGKONG ROAD, SHANGHAI.

London Representative—Mr. C. Cokayne-Naylor, 36-7-8 Southampton St., Strand, W.C.

Subscription rates: Mexican \$3.00 for Six Months or Mexican \$5.00 for One Year in China and Japan, payable in advance; Foreign Countries, Mexican \$6.00 Yearly; Single Copies, Mexican \$0.50 each.

Advertising Rates on application.

NOTICE TO CONTRIBUTORS.

The Editor will be pleased at all times to receive photographs, sketches or articles of character likely to be of interest to readers of this publication. It is understood that contributions will not be paid for unless remuneration has been stipulated and arranged for in advance.

All correspondence should be addressed to the Editor, The Oriental Motor, Five Hongkong Road, Shanghai, China.

American mail should be addressed to The Oriental Motor, United States Postal Agency, Box No. 749, Shanghai.

Registered at the Chinese Post Office as a Newspaper.

Vol. I.

SHANGHAI, MARCH 1920.

No. 12.

EDITORIAL.

MOVING FORWARD.

The time has come when China can no longer be pictured figuratively as the sleeping giant, for China and the Chinese are moving forward. And nowhere is this advancement more noticeable than in the field of aviation and the motor car. Each day are published developments which mark a step in advance for the nation that was once thought to be in the throes of an eternal slumber.

In this issue of "The Oriental Motor" are accounts of numerous developments which point to the progress which is being made now and which will be made in the future by the Chinese themselves. A small note tells of the application by a Chinese company for a franchise to operate a motor bus passenger system over certain streets in Shanghai. In this international settlement it would seem strange that the first organization to advance the motor passenger system idea would be composed solely of Chinese. Should the service be permitted the director of operations will be a Chinese who has been schooled as a motor engineer.

Another item tells of the sending of six students to the plant of the famous Vimy-Vickers airplane to learn the methods of construction and aviation engineering. Following this is another small note on the testing of airplanes made by the Chinese government in work shops at Foochow. The testing aviator is a Chinese trained in American terri-

tory. Still another item gives the details of an accessory business to be conducted by a Chinese motor expert.

The largest development by far, however, is that of the announcement that the May issue of "The Oriental Motor" will carry the exclusive story of the first motor car manufacturing plant in China. And this first factory, according to information at hand, is to be operated by a company of Chinese, many trained in the motor car factories of Europe and the United States. The company has a capitalization of Tls. 1,000,000—all subscribed by Chinese. The new plant is already under construction and the name of the car to be made, its specifications and other matters of interest will be contained in the story in May.

Again it is strange in a country supposed to be of a sonambulistic nature where foreigners are constantly seeking to develop every lucrative lead, that the first motor car factory would be the established idea of the Chinese themselves. It will be remembered that a similar attempt was made in Japan to manufacture motor cars without success but the plans of the new Chinese company have not been made without due deliberation. They have been approved by competent foreign automotive engineers and designers and nothing stands in the way of success.

These are only a few of the many every day instances. At present from all parts of China are coming rumors of the formation of motor truck transport companies for freight and passenger service, projects for the construction of good roads and many other feasible plans of especial interest in the motoring world.

China and the Chinese are moving forward.

MOTOR CYCLISTS TO THE FOREFRONT.

In the fast revolving cycle of the motor world of Shanghai and China, no one matter of interest can occupy the limelight for more than a limited length of time. Shanghai has already her Automobile Club, her Aero Club, a proposed Motor Boat Club, and now comes down to the footlights, the Shanghai Motorcycle Club.

The motorcycle population of Shanghai has now progressed to sufficient size to warrant the formation of such an organization and its reception should be one of enthusiastic support. More than 100 operators and owners of the motor bikes have already signified their willingness to get in on the organization and boost it to success.

In addition to its well-known speed and utility, the motorcycle has an added value in China not possessed elsewhere, with the possible exception of South America and South Africa. The lack of good highways keep the motor car and truck confined to certain limits defined by traversable roads but the motor cycle can go practically any place in the nation, over the donkey and wheel-barrow paths and over footpaths. The small width of the machine and the rider makes it especially adaptable for local conditions and it may be that the new Shanghai club can include among its many possible activities a touring bureau mapping out

motorcycle routes which may be taken for a week or a two weeks' outing. This certainly would increase the interest of both foreigners and Chinese in the machine and would do much toward increasing the motor bike population of Shanghai and China.

The club has already taken up the sporting side of motorcycle riding and is making arrangements with the International Recreation Club for the use of their Kiangwan race course for motorcycle racing.

The development of the club and its program for more motorcycles and cyclists will be watched with intense interest not only in Shanghai and China but in the United States, Great Britain and on the continent of Europe.

A MOTOR DEALERS ASSOCIATION.

During the month past in Shanghai there has been a growing agitation for the formation of an association of motor car dealers and "The Oriental Motor" takes this opportunity to express its approval of the idea. In the United States from the smallest towns to the largest cities, each have their dealers associations, all merging into a national organization. These have been found to be especially beneficial to the dealers in protective measures, in promoting a closer co-operation in the motor car trade and in furthering the motor population of the United States, which is now the world's greatest. It would be a decided step in advance to have such an organization in Shanghai and it is hoped that the passing of the next month will see its perfection.

AGAIN GASOLINE.

Every motoring nation has its gasoline troubles. The most recent developments of the world gasoline market, however, have been noted in England. A recent dispatch from that country tells of enormous profiteering which has been made public by a civic investigating committee in the city of London.

Another angle to the case of gasoline is given by the following editorial printed in a recent number of "Motor," an English automobile journal, under the head "World Monopoly of Oil":

"A feeling has been current in the City during the past week, arising out of extensive buying of "Shells" on order from America, that something is in the wind, and certainly the fact gives rise to a certain amount of curiosity and speculation. Some people are connecting the activity with Standard Oil. This, it is said, amounts to something more than a whisper, and there may or may not be anything behind it. Already the control of oil is in the hands of monopolist groups, and anything that tends to a further limitation of control necessarily excites criticism. It has been proved during the war in the future industrial progress of the country it must rank as a factor of equal national value. A great world monopoly such as is merely hinted at in City circles would constitute a still greater menace than

that already existing unless means can be found for frustrating the power of the colossal combine by some sort of State intervention. It will be remembered that in a recent issue we announced that the French Government had instituted a Government monopoly in the purchase and importation of refined oils and petroleum spirit, and that further measures were foreshadowed dealing with the distribution of the monopolized products. It is interesting now to return to the report of the much-discussed speech by Mr. Winston Churchill to the Center Group which was recently issued for publication. On the subject of monopolies he said:—"I consider monopolies a proper subject for national control, provided a good case is shown in regard to methods and merits in each case." The methods of oil monopolists we know: their merits have yet to be revealed."

MOTORISTS HAVE REFUSED CHEAPER FUELS.

Tests Have Proven So-called Low Grade to be Best and Most Economical.

It has been said that if it were not for the motorist himself low-grade fuels such as kerosene and heavier distillates would long ago have become the successors of gasoline. That characteristic of man to avoid what is not conventional, which causes the least bit of inconvenience, is costing the motorists, the world and China millions of dollars yearly. It has been demonstrated time and again that kerosene and lower grade fuels can easily be carbureted and made to give better results than gasoline now gives. This being a fact indisputable, there seems no plausible reason why the whole range of hydrocarbons except the very heaviest oils cannot be used with entire satisfaction in passenger automobiles and trucks. A New York newspaper recently conducted road and track tests of almost thirty devices, among them many using kerosene, and in each case the kerosene devices proved far more economical of fuel than the regular gasoline equipment, so that the cost of fuel for a given mileage was about one-half of the usual amount.

There is nothing sensational about the performance of these devices. The manufacturers of them are being hindered in their progress toward a general usage by the skepticism of the users. Carbureting these heavy fuels may seem to the average motorist to border on the impossible, but it is nothing of the sort; in fact, it may be said to be a rather simple matter of the proper use of heat and pressure. The time is not far distant when refiners will market simply automobile fuel with no definite name such as gasoline or kerosene, and that fuel with perfected carburetion systems will give more power and better performance generally at a cost one-half that of the present fuel.

MONOGRAM OILS LOCATE IN CHINA.

J. F. Mason, Representative, Places New Lubricating Line with Shanghai Firm.



J. F. Mason, Oriental Representative, Monogram Oils.

The Monogram line of lubricating oils, one of the first to be associated with automobiles in the United States, which is manufactured by the New York Lubricating Oil Company, has been placed for the central and north China territory in the hands of The Koster Company, 12 Nanking Road, Shanghai, by J. F. Mason, representative of the Pacific Coast branch of the company, now traveling in the Orient.

Mr. Mason, who has been with the New York Lubricating Oils Company for eight years, is now covering the entire Far Eastern territory from Japan to India, and expects to spend eight months in establishing agencies and making field investigations. It is possible that he will make Shanghai his permanent headquarters, beginning early next year and his work will be to cooperate with the various dealers in this section of the world.

The Monogram line is one which is widely known and used in all parts of the world. It has been among the leaders in the motor car field of the United States for many years and the praise and reception given to it since it was first introduced to this trade has had an almost unparalleled increase each year.

Mr. Mason left Shanghai for Manila on the Empress of Asia which sailed February 9. He intends to return to this city May 1 after visiting Hongkong, Canton, and Macao.

ABOLISHING THE TERM "PLEASURE CAR."

American Dealers Association Launches Campaign Against Misnomer.

The motor car has long since ceased to be a luxury and has now taken rank with the every day necessities of the business man and his family. This mode of transportation has increased the efficiency of the entire world and has come to be the world's third largest industry.

Recognizing this the National Automobile Dealers Association of the United States has launched a campaign to strike the misnomer, "pleasure car," from the vocabulary of the American motorist, from all publications and if possible from any use whatsoever so far as the automobile industry was concerned. The concerted action is to relegate the two words irretrievably to the scrap heap.

In order that there may not be a vacancy created where the term "pleasure car" once filled in, the dealers have asked the substitution of the words "passenger car" and in all probabilities passenger car it will now be for the Americans from this time hence.

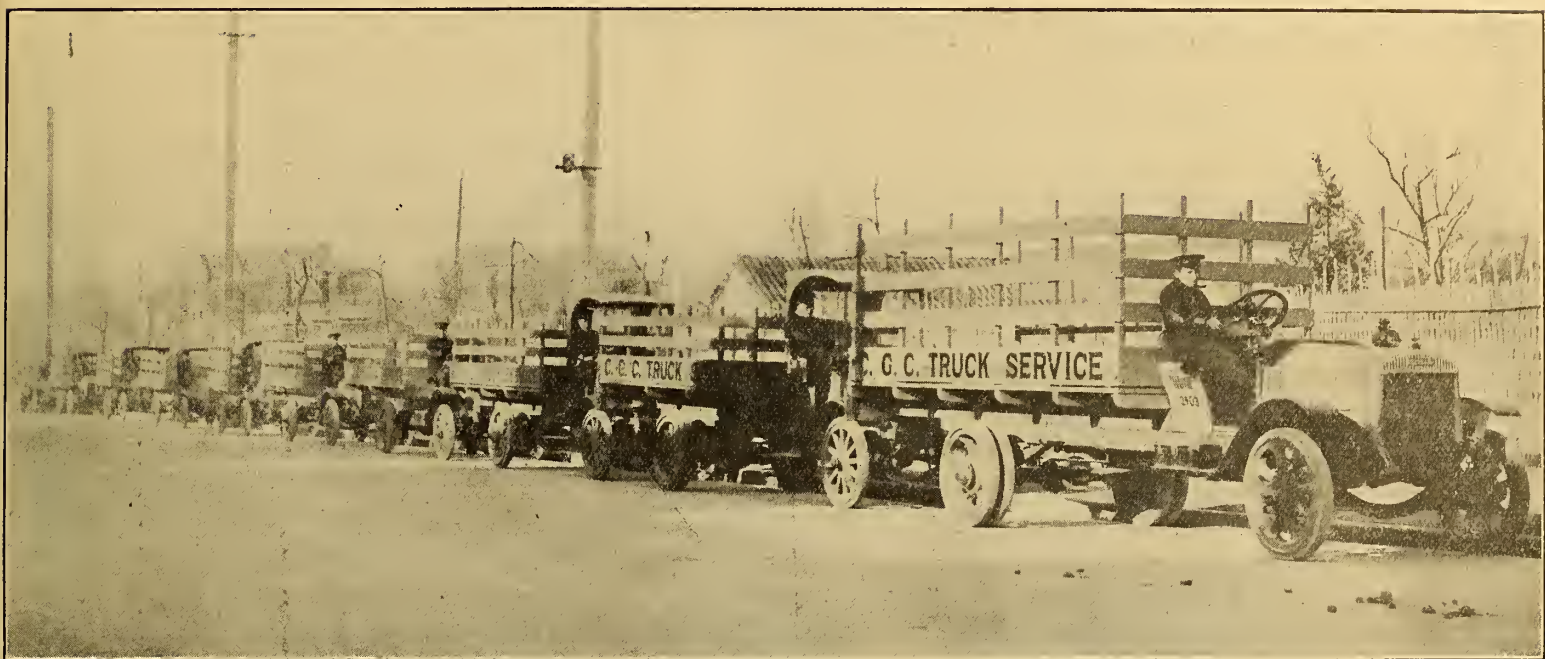
Coming to the support of the campaign of the dealers, the Automobile Trade Journal, an American publication, comments as follows on "The Pleasure Car—a Misleading Name:"

"In spite of all the agitation that has been carried on during the last two or three years to eliminate the term 'Pleasure Car' and to call passenger cars by their rightful name, there are still a considerable number of people, many of them in the automobile trade or connected with it, who continue thoughtlessly to apply the epithet 'Pleasure Car' to a motor vehicle intended for the transportation of passengers.

"Investigation has disclosed that more than eighty per cent. of all passenger cars are used for business purposes or to put it another way, over eighty per cent. of all the mileage covered by passenger automobiles is in business service. The term pleasure car is, therefore, misleading, as it covers less than twenty per cent. of the passenger vehicles in use.

"During the war when the automobile industry was threatened with classification as a non-essential industry, largely because the term pleasure car was used almost entirely in referring to passenger automobiles, it required a lot of hard work to convince the authorities at Washington that passenger automobiles were essentials and not luxuries. And there are still a number of misinformed gentlemen charged with the making of our state and national laws who persist in the belief that passenger automobiles should be classed as luxuries, along with cosmetics and expensive jewelry, and not as necessities in the everyday business life of the nation."

TIME IS MONEY



HAUL BY MOTOR TRUCK

THE C. G. C. TRUCK SERVICE

IS AT YOUR DISPOSAL DAY OR NIGHT

For estimates, apply to

THE CHINA GARAGE Co.

21 Foochow Road.

SHANGHAI

Tel. Cent. 2403

SHANGHAI'S NEW TRUCK REGULATIONS.

Shanghai Municipal Council's Promulgate New Licenses for Motor Carriers and Trailers.

Adopting the American schedule of truck weights with the use of the short ton of 2,000 pounds, the Shanghai Municipal Councils, both of the International Settlement and of the French Concession, have adopted new license tables for motor trucks and trailers. Heretofore, in the International Settlement truck licenses have run from Tls. 15 to Tls. 35 per quarter, with an interchangeable arrangement with the French Concession, which resulted in only two motor carriers being licensed in Frenchtown.

By mutual agreement this has been changed both for motor trucks, trailers and hire cars. The license for the latter will now be Tls. 8 in each concession, and for the former from Tls. 14 to Tls. 50, with a license required for each concession separately. The new French regulations will also affect delivery bicycles and motorcycles. In the International Concession fifty per cent. will be added to the truck and trailer licenses for public service carriers.

The new license regulations in part for the International Settlement are:

MOTOR FREIGHT VEHICLES.

(Including Freight Vehicles propelled by steam or electricity or by internal combustion engines.) That each wheel of the vehicle be fitted with tyres made of rubber or other soft or elastic material to be approved by the Council. That the chassis weight, the body weight allowance, the maximum freight capacity authorized by the makers and the gross weight of the vehicle be shown on a plate affixed in a conspicuous position on the vehicle and remain at all times legible and undefaced.

That the over-all length of the vehicle including the body or other structure be not more than 24 feet; and that the over-all width including the body or other structure be not more than 7 feet 6 inches.

That the over-hang of the vehicle be not more than one-fourth of its over-all length and be measured from the centre of the rear axle to the rear of the frame or body or other structure built upon the chassis. That no load be carried by the vehicle which will result in a greater wheel load than that indicated by the following table:—

Diameter of Wheel	Maximum of load per inch width of tire	Diameter of Wheel	Maximum of load per inch width of tire
2'0"	600 lbs.	3'3"	780 lbs.
2'6"	670 "	3'6"	810 "
2'9"	710 "	3'9"	840 "
3'0"	750 "	4'0"	870 "

That the speed of the vehicle be adjusted to the traffic, more especially at street crossings or corners, at sharp curves and in narrow roads and that, when its gross weight exceeds 7,000 lbs., the speed be not in excess of 12 miles per hour or, if drawing a trailer, 9 miles per hour.

FEES.*

- (a) Where gross weight does not exceed 4,000 lbs., Tls. 14 per quarter.

- (b) Over 4,000 and up to 8,000 lbs., Tls. 20 per quarter.
 (c) Over 8,000 and up to 12,000 lbs., Tls. 24 per quarter.
 (d) Over 12,000 and up to 16,000 lbs., Tls. 30 per quarter.
 (e) Over 16,000 and up to 20,000 lbs., Tls. 40 per quarter.
 (f) Over 20,000 and up to 24,000 lbs., Tls. 50 per quarter.
 (g) Over 24,000 lbs. by special arrangement.

For motor freight vehicles operating as vehicles for hire or as public freight carriers the fees are 50 per cent. in excess of those set out in the above scale. *Subject to approval at the forthcoming Annual Meeting of Ratepayers.

Freight Trailers.—That no load be carried by the trailer which will result in a greater wheel load than that indicated by the following table:—

Diameter of Wheel	Maximum of load per inch width of tire	Diameter of Wheel	Maximum of load per inch width of tire
2'0"	600 lbs.	3'3"	780 lbs.
2'6"	670 "	3'6"	810 "
2'9"	710 "	3'9"	840 "
3'0"	750 "	4'0"	870 "

That the trailer be fitted with efficient splash guards.

That the trailer be equipped with a drawbar and steering device to be approved by the Council and such as will ensure its following the same course as the vehicle by which it is drawn. Fees.*

- (a) Where gross weight does not exceed 4,000 lbs., Tls. 10 per quarter.
 (b) Over 4,000 and up to 8,000 lbs., Tls. 14 per quarter.
 (c) Over 8,000 and up to 12,000 lbs., Tls. 17 per quarter.
 (d) Over 12,000 and up to 16,000 lbs., Tls. 21 per quarter.
 (e) Over 16,000 and up to 20,000 lbs., Tls. 28 per quarter.
 (f) Over 20,000 and up to 24,000 lbs., Tls. 35 per quarter.
 (g) Over 24,000 lbs. by special arrangement. This license is not available for the French Settlement.

The tariff for the French Concession follows:—

Motor Trucks of at least 1 ton, Tls. 20 per quarter

Motor Trucks of less than 1 ton, Tls. 10 per quarter

Motor Trucks for delivery, or removal of at least 1 ton, Tls. 20 per quarter

Motor Trucks of less than 1 ton, Tls. 10 per quarter

Delivery wagons or removal vans drawn by animals from Tls. 3 to Tls. 5 per month

Delivery cycles (pedals), Tls. 0.50 per month

Delivery cycles (motor), Tls. 5 per quarter.

The adequate insurance of your Motor Car is of greater importance than the insurance of your House and Furniture. An accident to your Car may not only entail damage to the Car but may involve you in heavy Third Party liabilities.

UNION'S
COMPREHENSIVE
MOTOR CAR POLICY

Covers at a moderate premium

THIRD PARTY LIABILITY WITHOUT LIMIT

And also fully indemnifies the Assured for

ACCIDENTAL DAMAGE

UNION INSURANCE SOCIETY OF CANTON, LTD.

(Incorporated in Hongkong)

ESTABLISHED 1835.

Policies are issued at the Society's

HEAD OFFICE, Queen's Buildings, Hongkong.

And also at the following Branch Offices in China:

SHANGHAI, Union Building, No. 4, The Bund.

HANKOW, Union Buildings, Tungting Road.

TIENTSIN, No. 6 Victoria Road.

AIR CURRENTS.

Being Notes from all Parts of the World on Aircraft Subjects.

The "Macao Aerial Transport Company," a subsidiary service in the route arranged by the Far Eastern Aviation Company, is now in course of formation and, on completion, will include Macao, Hongkong and Canton in its field of operations. When the service gets well under way, a permanent terminus will be established in "Aeria Preta," part of the Macao territory.

The British Air Ministry has decided to scrap the great airship station at East Fortune, Haddingtonshire, made famous by the R. 34, the Atlantic voyager. The men and all removable material and plant are to be transferred to a Yorkshire aerodrome. It is also understood that airship R. 29 is to be broken up.

Sir Arthur Whitten Brown, who with Sir Jas. Alcock made the trip across the Atlantic from Newfoundland to Ireland in a Vickers-Vimy airplane some months back, has entered a Vickers-Vimy for the proposed flight across the Pacific for the prize of \$50,000 offered by Mr. Ince, a film magnate of Los Angeles.

The London Flying Club was recently opened at Hendon, and adjoins the famous aerodrome where some 600 service pilots were taught flying during the war. In his speech at the opening lunch Lord Louth referred to it as a "wonder" club, and such it is. There are over eighty bedrooms, and members can not only fly, hire machines and pilot themselves, but may hire cars at a reasonable figure, and enjoy the delights of tennis, swimming, shooting, fishing, skating, and golf. After lunch free flights were given to many of the guests.

An aerial postal mail to Bombay was inaugurated on January 1. The saving of time effected afforded residents of Karachi an extra 24 hours to catch outgoing steamers.

Last month while near Madrid a French airplane, flying at a great altitude and carrying seven persons, fell near Guadalajara (new Castile). Three of the occupants were killed and the others badly injured.

Nurse MacWaugh, an Australian, the first woman to pass the flying tests since the war, has completed the course for an R.A.F. pilot, and, according to a message from London, received her certificate. She left for Australia, with the intention of taking part in commercial aviation.

Lieut.-Col. J. C. Porte, inventor of the ill-fated "Felixstowe Fury" flying-boat, which crashed in the presence of thousands of holiday-makers, at Felixstowe last August, has died at Brighton. Only 35, he was prominent in the old R.N.A.S. and the Royal Air Force. The Porte

Baby, a flying-boat large enough to carry a land scout airplane on its top plane, the Porte Super-Baby, and the Porte boat were also evolved by him.

At a recent meeting of the Shanghai Rotary Club, J. A. Ritchey, postal commissioner of the Chinese Postal System, advocated the use of aerial passenger and mail service for China. He stated that with the combined service, adding light freight, that the service should be self supporting. The plan may be put into action if the aerial transport company now being formed in Hongkong and Canton extends its service to Shanghai and the North.

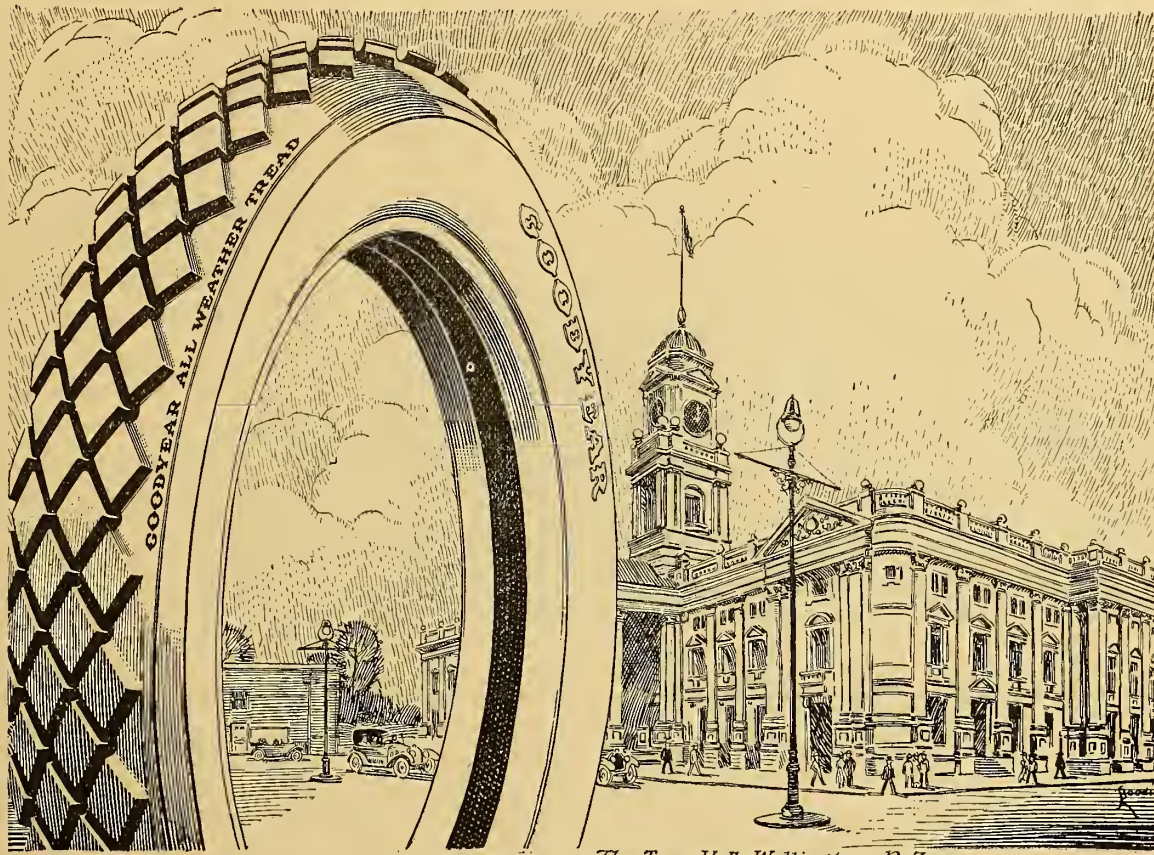
Six Chinese students are to be sent to the Vickers plant in England to study the construction of aircraft, according to a recent announcement. They are to make the voyage at the expense to the Department of Aviation of the Republic of China. The announcement also included the statement that new airplanes made by the government at Foochow are to be tested by Yan Sen-yat, an experienced Chinese-American aviator, who was born in the Hawaiian Islands.

Milton O. Clark, a representative of the Standard Oil Company at Canton, has been made assistant commissioner for China of the round the world air derby.

The following report of the formation of the Far East Aviation Company at Macao is quoted from material furnished by Major Charles R. Glidden, executive secretary of the round the world derby by air commission which was recently in Shanghai: "What promises to be one of the largest aerial operating concerns in the Far East, which has been properly named the Far Eastern Aviation Company, has been formed at Macao. The company has ordered seven planes and employed ten American pilots and mechanics. The company was organized by C. E. W. Ricou, one of the leading business men of the city. The general offices have been opened in Hongkong. The proposed routes are between Hongkong and Macao, Hongkong and Canton, Hongkong and Shanghai, Shanghai and Manila. Stops will be made at intermediate points. Mr. Ricou is an experienced aviator." The aviators and mechanics mentioned are already in Hongkong.

The Aero Club of Malaya has under consideration the establishment of a large air station at Singapore.

The first two Avros ordered by the Chinese government from the Handley-Page Company have arrived in Peking and have been successfully put through their paces by Captain Mackenzie. Captain Mackenzie's testing gave the Chinese capital its first "look see" at stunt flying.



The Town Hall, Wellington, N.Z.

Do Your Tires Suit You?

PERHAPS you are satisfied with the service being given you by the tires you use. If you are, that is well, and the limit of any tire's accomplishment.

But perhaps you feel—as does another portion of the motoring public—that your tire money should buy a little more, in miles and untroubled travel, than it does now.

As much more, for instance, as the highest type materials and methods could give.

If you feel this way, we suggest that you follow the general trend, and try Goodyear Tires.

They are the preferred tires of many, many motorists. Taking the world as a whole, more of them are bought than of any other brand.

A quality of materials and a method of manufacture less than the highest could not sustain this tremendous popularity.

A tire less than immensely superior could not increase it—as Goodyears are doing.

Goodyear Tires are made in both millimeter and inch sizes.

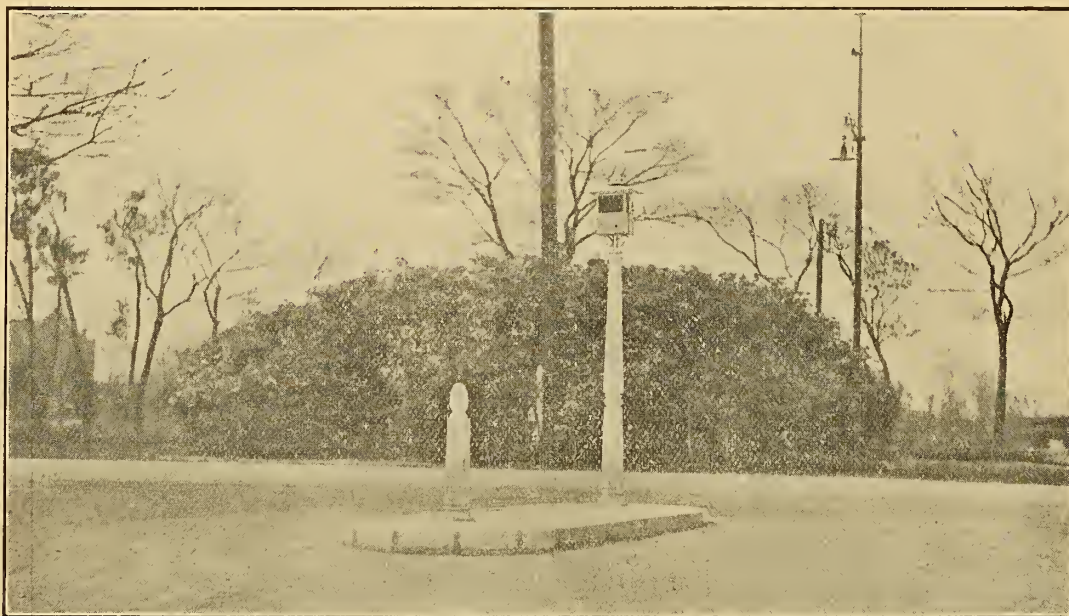
GASTON, WILLIAMS & WIGMORE (F. E. D.), INC

Wholesale Distributors

GOODYEAR

TIRES

THE NEW FRENCHTOWN SAFETY ISLANDS, SHANGHAI.



Adding further to the night safety of the motorist, the French Municipal Council of Shanghai has erected electric signals on small safety islands at street crossings. A green light indicates a clear right of way and a red warns the motorist of approaching traffic from the cross street.

TWO MILLIONS ARE OFFERED IN 1920 AIR PRIZES.

Flights in France and Italy are on Program as Well as Round the World Derby.

Two million dollars in prizes will be offered to the world's champion airmen in various contests during this year, the Aero Club of America has announced.

Plans are under way for a series of contests which, it is expected will advance the "conquest of the air" farther than ever before, and information received by the Aero Club here indicates that more birdmen will compete than in 1919.

All competitions will be held according to the rules of the International Aeronautic Federation, of which the Aero Club of America is the sole representative in the United States.

TESTS NAMED.

Among the principal tests for which the club is to select American competitors are:

1.—The International Aviation Trophy Contest to be held in France, for which the National Aero Club of each of the countries represented in the Federation can enter three representatives.

2.—The International Marine Flying Trophy, to be held in Italy, for which the National Aero Club of each of the countries represented in the Federation can have three representatives.

AERIAL DERBY.

3.—The first aerial derby around the world, the rules and regulations for which are being considered by the Federation at date of writing and for which \$1,000,000 in prizes is being raised.

4.—The International Balloon Trophy Contests, to be held in the United States, for which the National Aero Club of each of the countries represented in the Federation can enter three representatives.

5.—The International Aerial Derby across the United States, with \$100,000 in prizes, being organized by the Aerial League of America, which will be open to all the National Aero Clubs and clubs and organizations affiliated with the Aero Club of America and the Aerial League of America.

CUBAN CONTESTS.

6.—The Cuban Aerial Contests, being held under the auspices of the Aerial League of Cuba during the third Pan-American Aeronautic Congress at Havana February 21 to March 1, 1920.

7.—The \$50,000 prize offered by Mr. Thomas H. Ince through the Pacific Aerial Club and Aero Club of America for a flight across the Pacific.

8.—The \$25,000 prize offered through the Aero Club of America by Mr. Raymond Orteig for the first flight from New York to Paris or vice versa.

9.—The Intercollegiate Trophies and \$5,000 Valentine prizes being organized by the Aerial League of America.

10.—The Curtiss Marine Flying Contest for \$1,000 cash prize, open to members of the Aero Club of America and its affiliated clubs.

11.—The \$2,000 Glidden Trophy Aerial Touring Contest, being organized by the Aerial Touring Association, of which Major Charles J. Glidden, the originator of the famous Glidden Tours, is president.

12.—A number of other contests with large cash prizes are being organized, the details of which will be announced in the near future.



ENTIRELY
NEW MODEL
F B 50 CHEVROLET
WITH
MAGNETO

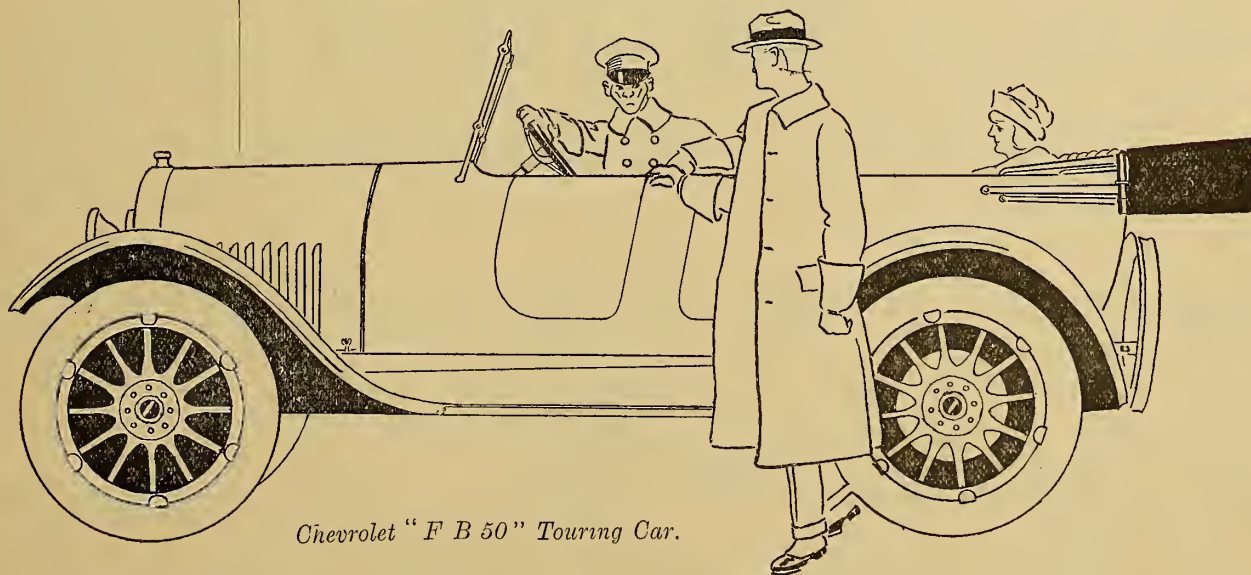
Sole Agents

H. S. HONIGSBERG & Co., Inc.,

40 BUBBLING WELL

Phone W. 1234

SHANGHAI



Chevrolet "F B 50" Touring Car.

THE LITTLE THINGS ABOUT YOUR CAR.

It is the little things about your motor car that count just as it is the little things in your business that often cause your best laid plans to go astray.

Each month on this page will be published little things about your motor car that you should know—often, knowledge that will save you repair bills.

Where gear cases or housings are provided with vents to permit the escape of air under pressure that results from heating, care should be taken to see that the vents are kept free. Not infrequently careless painters cover the screen that generally is fitted to the opening.

If upon examination the crankshaft or connecting rod bearings are found to be worn a little more on the ends than in the middle it may be taken as a sure sign that the crankshaft is not quite true.

The man who is too busy to have his spark plugs cleaned is shortening his battery life. Even though the engine is using magneto ignition, the carbon on the spark plugs is putting unnecessary work on the battery. The engine must be turned over more rapidly in order to get a spark from the magneto and the battery has to do much more work for each start than it would if the plugs were clean. The motorist who has his spark plugs unscrewed and cleaned every week or two will find that he has taken a big load off the battery and that he is able to get his engine turning over in noticeably shorter time.

It is wise occasionally to examine the rear wheels for slack. A little wobble on the axle will soon wear the key or key-seat into a bad condition necessitating extensive repairs sooner or later.

A great many cars vibrate and rattle at high speeds due to loose front fenders. These can often be reinforced and made rigid by placing a rod between the two just below the lamps. Make two angle washers and draw tight into place. Pull the fenders back first by hand to get the length of the rod and the angle at which to make angle washers. Make of one-quarter inch iron.

The seat covers used in motor cars generally wear first at the seams. In order to prevent this it is a good plan to reinforce the seams by sewing over them a strip of imitation leather about an inch wide. The strips are sewed to the cover of cloth on each side of the seam. This reinforcement also prevents dust from accumulating in the seams and thereby adds to the cleanliness of the cover.

Don't permit the driving wheels to slide either in starting or stopping. Gradual clutch and brake engagement will avoid this. Proper adjustment of each and good judgment in driving will amply repay you.

When the small rubber cushion in the base of a tire valve is displaced in any way it is apt to depress the small core stem of the valve so that a slow leak results, which the car owner probably blames on a tiny puncture.

Don't forget the top. Dust it off occasionally to preserve the material.

Don't attempt to file the contact points or adjust a relay. Take it to an experienced electrician. Don't ever race the motor.

Comparatively few owners and drivers of motor cars are aware of the value of soap for sealing leaking joints in the gasoline system. Very frequently gasoline oozes out around the filler cap, especially when the tank is nearly full. Such a leak is objectionable because the gasoline spreads over the outside of the tank, which nowadays is usually carried at the rear of the car, collects dirt and impairs the finish. A coating of ordinary soap on the gasket and threads will prevent leakage, even when the tank is full. When joints in the fuel line and around the carburetor, in particular, develop small leaks, a coating of soap will usually prove efficacious.

The primary current should never be run through the master vibrator coil when the secondary circuit is not in use, as this will ruin the unit.

By removing the wheel and band and cutting out a short bit of lining under the anchor squeaks may be eliminated from the braking system. The section removed may be taken from between the rivets, so that these latter are not disturbed and the lining will be just as firmly held as before.

There are several causes of oil collecting on the points of the spark plugs. One of these is the use of too heavy a lubricating oil. If this trouble is persistent try mixing a pint of kerosene with each gallon of oil. This may cure the trouble.

Millions of gallons of fuel are wasted every year through the idling of truck engines. When the truck is standing at the loading platform or elsewhere the engine should be stopped. Unless some watch is maintained over the drivers they will idle their engines to avoid the trouble of making a fresh start.

The Creed of Goodrich

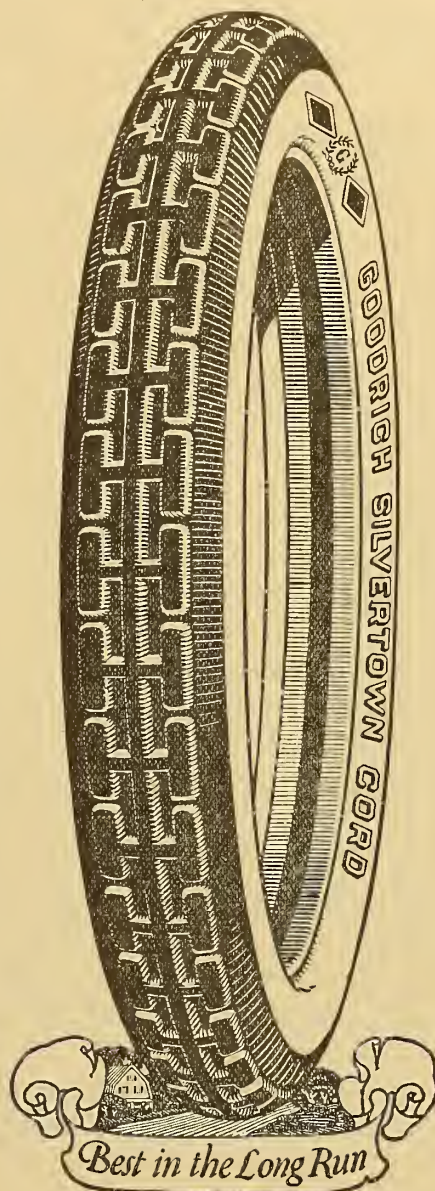
Whatever is right for a responsible manufacturer to give the customer, The B. F. Goodrich Rubber Company gives.

To do what is right is not a Goodrich *policy*; it is The Goodrich Creed. It is fundamental.

It is the foundation on which the great Goodrich institution has been built.

The Creed of Goodrich serves you, whether you live in China, Europe, or America in buying the sturdy tire of tires

SILVERTOWN CORD TIRES



Adjustment Basis:

7,000 Miles

FURUKAWA & Co., Ltd.

SOLE AGENTS FOR CHINA

1B Jinkee Road, SHANGHAI. Tel. Central 4932.

PEKING, TIENTSIN, HANKOW, HONGKONG, DAIREN.

NOTES FROM HERE AND THERE.

"The Oriental Motor" takes pleasure in announcing that the May number of this publication will contain a full account of the first factory and corporation in China to manufacture motor cars. The factory is now in the process of construction and the company, which has a capital of Tls. 1,000,000, has been formed for some time. Experts, Chinese and foreign, have been employed. Only a few remaining preliminary steps are necessary before the announcement. The story will be an exclusive one for this publication.

T. Kusaka, China manager for the B. F. Goodrich Company, is attending a conference of Goodrich representatives in Tokyo.

Capt. J. E. Inch, managing director of the Shanghai Garage Company, Ltd., has returned from a business trip to England and America.

R. L. Ward, a former captain in the famous Lafayette Esquadrielle, who has more recently been with the Asia Banking Corporation, Shanghai, has returned to the United States in the interest of a newly formed motor concern of Shanghai.

The first step toward establishing a motor bus passenger service in Shanghai was taken recently when W. H. Chen, acting as attorney for the Chinese Motor Bus Company, Ltd., made application to the Municipal Council for a motor bus service on Avenue Edward VII, Thibet Road and Ningpo Road. The plans of the company call for a circuit service on the streets of the city. If the franchise is granted, the service will be in charge of Louis S. Pang, an automobile engineer who has recently returned to Shanghai after spending some years abroad.

Some representative gasoline prices from the Southern states of America may be observed in the following excerpt from a report which tells of a raise of one cent per gallon in Alabama, Florida, Georgia and Mississippi. "The minimum and maximum prices, respectively, now in effect in those states are: Alabama, 25-27 cents; Florida, 24½-27 cents; Georgia, 25½-27½ cents; and Mississippi, 25 cents."

A. L. Zollner, Oriental division manager of the John N. Willys Export Corp., who has been in Shanghai for three weeks in the interest of his company has departed for Japan. Mr. Zollner will return to this city within a short time and will probably make his headquarters here.

N. Tominaga, managing director of the newly organized Monchen Motor Company of Tsingtao, is in Shanghai purchasing garage equipment and other supplies.

The Moline Knight, manufactured by the Root and Van Dervoort Engineering Company of Moline, Ill., U. S. A., is to be known hereafter as the R. and V. Knight, according to a recent announcement.

Unmistakable evidence of the appreciation which foreign markets hold for American methods and successful American names, is reflected in news from London to the effect that the investing public there has oversubscribed the first public offering of stock in the new British Willys-Overland enterprise, the formation of which is mentioned elsewhere in this issue. The subscription list for £1,000,000 in the Willys-Overland-Crossley, Ltd., at ten per cent. was filled long before scheduled time, with many thousands of applicants.

A cord construction tire has been placed on the Paris market by the Michelin firm. The tire is constructed with clincher bead and in two sizes only for the present: 880 and 820 millimeter diameter. The tire will be sold at an increase of thirty per cent. on the fabric construction. This is the first cord tire to be produced in France.

H. C. Steiner, factory representative of the Goodyear Tire and Rubber Co., is making a round trip of inspection to Manila and Hongkong on the Empress of Asia.

G. M. Malcolm, representative of the Robertson-Cole Company of New York, exporters of motor cars, is visiting Shanghai. He is completing a tour of the Orient.

A rise is forecasted in recent advises from the United States in the prices of lubricating and machine oils. The boost in the former will average from thirteen to twenty-two per cent. approximately and fifty per cent. in the latter.

The number of women motorists who now receive service from the Automobile Association and Motor Union in England has increased from a few hundred to 10,000. A large majority are active members and more not only drive their own cars but also carry out minor repairs on the road. The army of women motorists, according to latest information from all parts of the world, is steadily increasing. Women's motoring activities during the war have no doubt been largely responsible for the growing popularity of the art, but the automatic self starter and other modern improvements will have to be also reckoned with as an added impetus.



Why this Essex Sales Leadership?

*More Than \$35,000 Gold was Paid
for 22,000 Essex Cars Now in Service*

Essex sales have astonished motordom, and the Essex is only a year old.

The wisest men of the industry could not have foretold such swift success.

Now Essex proves the accuracy of motordom's judgment.

Let the official tests speak :

On the Cincinnati Speedway a stock chassis Essex made a new world mark of 3037 miles in 50 hours, under observation of the American Automobile Association.

With other trials the same Essex ran a total of 5870 miles in 94 hours, 22 minutes driving time, averaging over a mile a minute.

Still another Essex phaeton holds the world's 24-hour road mark of 1061 miles made in the face of a blizzard over snow-covered Iowa country roads.

That was the answer. The Essex had made good, it had shown such qualities and unexpected performance that owners could not restrain their enthusiasm. It was contagious. Even non-owners caught it, and added their praises for Essex.

But Shanghai users do not require a car with great speed. The records referred to are shown merely to demonstrate the remarkable durability and endurance of the Essex Motor—that it is a really superior Motor.

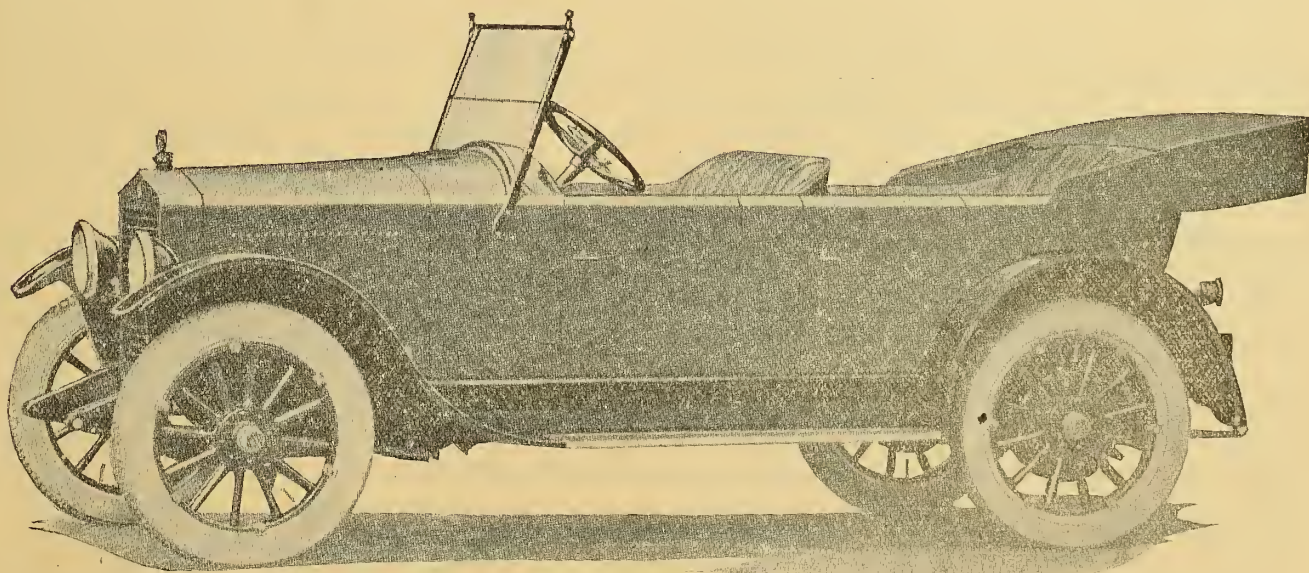
So what greater proof of Essex economy could be asked than its new world endurance mark.

Let us demonstrate one.

DODGE & SEYMOUR (China), Ltd.

Sole Agents.

89/91, Rue Montauban, Shanghai.



Essex 5-Passenger Phaeton

AUTO PRICES PREDICTED HIGHER.

Shortages Will Bring Rise, H. S. Honigsberg Says, After Trip to U. S.



H. S. Honigsberg, Managing director of H. S. Honigsberg and Co., Inc., Shanghai.

Now is the time to buy motor cars, H. S. Honigsberg declares after two months and a half spent in the eastern part of the United States in attendance at both the New York and the Chicago Automobile shows, and inspection of the big eastern automobile plants. Mr. Honigsberg, manager director of H. S. Honigsberg & Co. Inc., handling the Chevrolet, Buick and Cadillac, insists that delay will mean disappointment.

"It might be inferred that I mean particularly prospective purchasers of Chevrolet, Buick and Cadillac," said Mr. Honigsberg, "but the advice applies to every one, no matter what car he has decided upon. The real results of the strikes and subsequent shortages are just now being felt and the outlook is that there will be even more disturbances, and with these conditions every one is predicting increases in the price for all cars. The price jump is coming.

"The New York and Chicago Automobile shows were wonderful successes, although the prevalence of influenza had its effect on the attendance. The new Model 59 Cadillac was the hit of the show with its new stream line effect. Only stock models were shown of all the cars as the majority of manufacturers were on an 80 per cent. war

basis and between the time of the signing of the armistice and the show there was no time for the making of new models.

"The American car has completed the most strenuous endurance run in his history. The event started April 6th, 1917, and terminated November 11th, 1918. The itinerary of 4,461 miles, called for a journey from Washington, D. C. to Berlin, Prussia. It was not necessary to go the whole distance, but at the finish the car, as then equipped and tuned, could have gone anywhere in Europe it wanted, and at about any speed that Chauffeur Pershing chose to send it. The motor industry emerged from the great War with increased prestige.

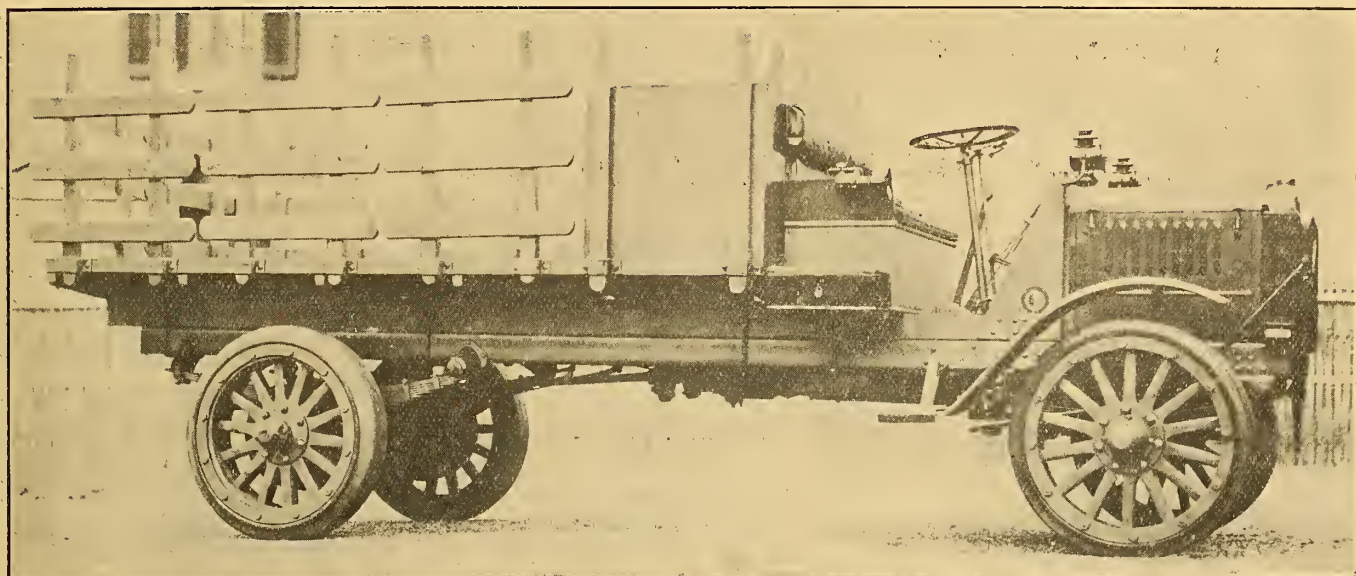
"There was scant cheer for the automobile manufacturer in the grey days of early 1918. He had everything needed for cars but steel, gasoline, rubber, coal and labor. At one time about all they were sure of were license tags, air for tubes and an obligation to charge a tax and in rapid succession had to justify themselves to various cabinet departments, committees of the House and Senate, to departments of the Army and Navy, to the Allied purchasing commission, the Federal Trade Board, Federal Reserve Board, the Food administration the Railroad Administration and the Priorities commission. These all held them in a grip of unprecedented power and with it all four months after the signing of the Armistice where the automobile manufacturers had been seventy per cent munitions and war industries they were back full strength on pre-war production.

"To-day there are seven million six hundred and two thousand motor vehicles in the United States. This is one to every fourteen in a population of 106,000,000. If the average could be up to one to six, as in Iowa, there would be a gain in round numbers of 9,500,000 vehicles. If this total seems impressive due regard must be given to the staggering possibilities of the export trade. Has it ever occurred to you how completely the United States monopolizes the use of motor vehicles?

"Africa with 138,000,000 population has 24,000 automobiles, Asia with 819,000,000 has 27,000. Oceania, including Australia and New Zealand, with 65,000,000 population has 54,000 vehicles. The Western Hemisphere, exclusive of the United States, has a population of 94,000,000 and 157,000 motor vehicles. This is a total for all of the world, excluding the United States, of 719,000 vehicles, or one to every 2,175 of population. In other words, the United States with one-sixteenth of the world's population has ten times as many automobiles as the remainder of the world put together. Suppose they ever start to buy?

(Continued Page 48)

AN EXCEPTIONAL OPPORTUNITY



WE OFFER A NUMBER OF

WICHITA 3-TON TRUCKS

as illustrated above with stake bodies and detachable tires

Will sell singly or as a whole as Desired

MOTOR.—4-cylinder, en bloc, bore $3\frac{3}{4}$ ", stroke $5\frac{1}{4}$ ". Spark plugs $\frac{5}{8}$ "—18 ALAM. Valves enclosed, protected from dirt and dust.

IGNITION.—High tension magneto.

LUBRICATION.—Gear pump and splash oil scoops on end of connecting rods. Capacity of oil base 2 gal.

COOLING.—Centrifugal Pump; $5\frac{1}{2}$ gal. Cellular type radiator. Inlet hose connections $1\frac{1}{4}$ " diameter. Four-blade aluminum fan with ball bearings.

CLUTCH.—Quick Adjustable cone, leather faced, spring inserts. Dimensions, $15 \times 2\frac{1}{2}$ ".

TRANSMISSION.—Selective sliding gear, 3 speeds forward, 1 reverse. Face of gears, 1". Reduction through transmission: 1st speed, 3.65 to 1; 2nd speed, 1.69 to 1; 3rd speed, direct drive. Reverse speed, 4.78 to 1.

DRIVE.—Propeller shaft to transmission; tubular propeller shaft transmission to worm drive rear axle.

SPRING.—Heat treated. Front, semi-elliptic, 9 leaves, length 40", width $2\frac{1}{4}$ ", suspended under frame. Rear, semi-elliptic, 14 leaves, length 56", width 3", outside bracket suspension.

BRAKES.—Service, internal expanding on rear wheel drum. Diameter, $18 \times 2\frac{1}{4}$ ". Emergency, internal expanding on rear wheel drum, $18 \times 2\frac{1}{4}$ ".

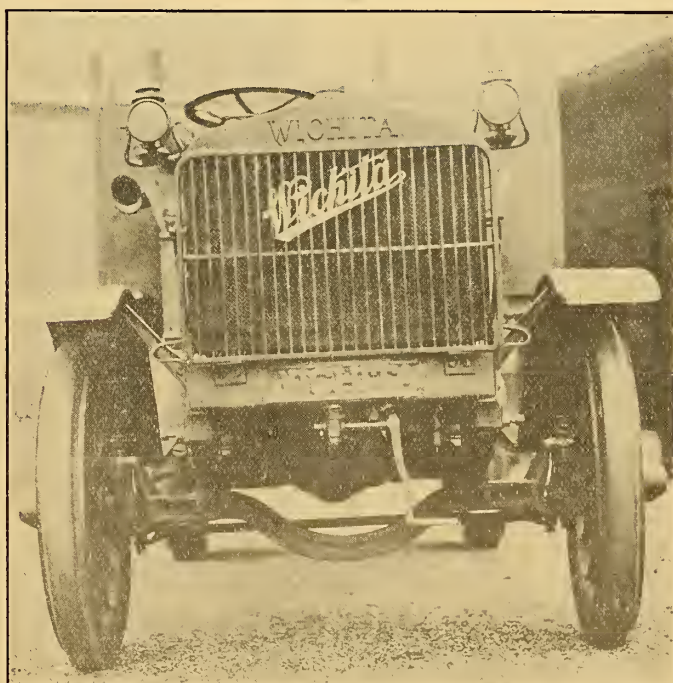
WHEELS.—Artillery type, front and rear, 36" diameter, 14 spokes. Front wheel spokes, $2\frac{1}{4}$ ".

TIRES.—Front, solid, single, 37×4 ". Rear, solid, 37×7 ".

EQUIPMENT.—Two oil side lights, one oil tail light, horn, tool kit, and jack.

Complete stock of spare parts including tires

PRICE ACCORDING TO QUANTITY



For further particulars apply to

O. E. BRINGEWATT

47 BOONE ROAD, SHANGHAI.

LATEST SPECIFICATIONS OF U.S. GASOLINE PASSENGER CARS

Revised March 10th from the latest 1920 announcements of the leading manufacturers of America. Prices quoted are in gold dollars, F. O. B. Factory. Specifications and prices quoted are on stock models exclusively, except where otherwise noted, and do not include crating, railway and ocean freightage, insurances or other similar items.

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan	Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan
ALLEN											ESSEX										
Series 43	4-4½x5	Conn	A-Lite	110	32x4	SS	\$1495	\$1495	.....	.....	A	4-3½x5	Delco	Delco	108½	32x4	SS	\$1595	\$1595	.....	\$2250
ALSACE											FERRIS										
	4-3½x5	Bosch	Dyneto	116	32x4	SS	.....	1485	.....	.....		6-3½x5½	.....	L-N	130	32x4½	SS	.....	.....	\$13390	.....
AMERICAN											FORD										
B	6-3½x5	A.Kent	Wsths	122	32x4	SS	†1895	1865	\$1965	\$2950	T	4-3½x4	Ford	.....	100	30x3½r	C	500	525	.....	775
ANDERSON											FRANKLIN										
5-30	6-3½x4½	Conn	Remy	120	33x4	SS	†1835	1775	1850	2650	9B	6-3½x4	A.Kent	Dyneto	115	32x4	SS	2700	2750	†2750	3750
APPERSON											GARDNER										
8-20	8-3½x5	Remy	Bijur	130	34x4½	SS	2950	†2950	2950	4000	G	4-3½x5	Wsths	Wsths	112	32x3½	SS	†1125	1125	.....	.....
ARGONNE											GLIDE										
	4-3½x5½	Eisman	.....	118	32x4	SS	4500	†4700	.....	.....	6-40	6-3½x5	Wsths	Wsths	119	32x4	SS	†1695	1695	.....	.....
AUBURN											GRANT										
639-H&K	6-3½x4½	Remy	Remy	120	33x4	SS	1695	1695	†1695	2475	6-H	6-3½x4½	A.Kent	Bijur	116	32x4	SS	†1595	1595	.....	2450
AUSTIN											HALLADAY										
	12-2½x4	Remy	Remy	142	34x4½	SS	†4250	.....	*4250	5500	22	6-3½x4½	A.Kent	Wsths	116	33x4	SS	1985	1985	.....	2485
BELL											HANSON										
	4-3½x4½	A.Kent	A-Lite	114	31x4	SS	†1395	1395	.....	.....	54	6-3½x4½	Delco	Delco	121	32x4	SS	.....	1685	.....	.....
BIDDLE											HARROUN										
	4-3½x5½	Simms	5G&D	121	32x4	SS	3150	*3300	.....	4600	A-1	4-3½x5½	A.Kent	Remy	106	30x3½	...	1095	995	.....	.....
BOUR-DAVIS											HATFIELD										
20	6-3½x4½	Wsths	Wsths	118	32x4	SS	.....	1700	.....	1885	42	4-3½x5	Conn	Dyneto	115	32x4	SS	1125	1695	†1695	3500
BREWSTER											HAYNES										
	4-4x5½	Berling	USL	125	34x4½	SS	.....	7400	.....	.....	45	6-3½x5	Kingston	L-N	127	34x4½	SS	†2685	.....	2685	3550
BRISCOE											46	12-2½x5	Delco	L-N	127	34x4½	SS	.....	†3450	3450	4200
1920	4-3½x5	Conn	A-Lite	109	30x4	QD	.....	1285	.....	.....	HOLLIER										
BUICK											206-B	6-3½x4½	Remy	Wsths	120	33x4	SS	†1985	1985	.....	.....
H-6-44-47	6-3½x4½	Delco	Delco	118	33x4	SS	1495	1495	.....	2255	HOLMES										
H-6-49-50	6-3½x4½	Delco	Delco	124	34x4½	SS	.....	.....	1785	2695	1	6-3½x4½	Holmes	Dyneto	126	34x4½	SS	.....	2900	†2900	4000
CADILLAC											HUDSON										
57	6-3½x5½	Delco	Delco	125	35x5	SS	.....	†3790	3790	4450	Super-6	6-3½x5	Delco	Delco	125½	34x4½	SS	.....	†2200	2200	2900
CAMERON											HUFFMAN										
45	6-3½x4½	Conn	.....	108	32x4	...	.....	.....	1700	.....		6-3½x4½	Conn	Dyneto	120	32x4	SS	.....	1795	.....	.....
55	6-2½x4½	Conn	Bijur	118	32x4	...	.....	2000	.....	.....	R-3	4-3½x5½	A.Kent	Wsths	112	32x4	SS	1450	1450	.....	2185
CASE											JACKSON										
V	6-3½x5½	Delco	Wsths	126	34x4½	SS	†2400	.....	2400	3000		6-3½x4½	A-Lite	A-Lite	121	33x4	SS	.....	1885	.....	2850
CHALMERS											JONES										
35-B	6-3½x4½	Remy	A-Lite	{122	32x4}	SS	.....	.....	1765	2370	6-28	6-3½x5½	A-Lite	A-Lite	126	34x4	QD	2250	2350	2250	.....
35-C				{117	34x4}		1685	1685	.....	2370	JORDAN										
CHAMPION											F	6-3½x5½	Delco	Bijur	127	32x4½	SS	.....	2775	2775	3800
K.O.	4-3½x5	Delco	Dyneto	116	32x3½	SS	.....	1150	.....	.....	M	6-3½x4½	Delco	Delco	120	32x4	SS	.....	2550	.....	3600
	6-3½x4½	Delco	Delco	118	32x4	SS	.....	1495	.....	.....	KING										
CHANDLER											H	8-3 x5	A.Kent	Wsths	120	32x4½	SS	2600	†2585	2585	3100
	6-3½x5	Bosch	G&D	123	33x4	SS	†1895	.....	1895	2795	KISSEL KAR										
CHEVROLET											Custom Built	6-5½x5½	Remy	Remy	124	32x4½	SS	2975	†2875	2975	†3975
490	4-3½x4	Remy	A-Lite	102	30x3½		715	735	.....	\$1185	KLINE KAR										
F-B	4-3½x5½	Remy	A-Lite	110	33x4	SS	1210	1235	.....	1795	6-55-J	6-3½x4½	Conn	Wagner	121	33x4	SS	†1965	1990	1990	2790
CLEVELAND											LAFAYETTE										
	6-3x4½	G&D	G&D	112	32x4	SS	†1385	1385	.....	2195		8-3½x5½	Delco	Delco	132	33x5	SS	.....	.....	.....	.....
COLE, Aero-Eight											LEACH										
870	8-3½x4½	Delco	Delco	127	33x5	SS	2750	†2750	3995	3995		6-3½x5½	Delco	Delco	126	32x4½	SS	4800	3950	†4800	.....
COLUMBIA											LEXINGTON										
	6-3½x4½	A.Kent	A-Lite	115	32x4	SS	1945	1795	†1945	2850	S	6-3½x4½	Conn	G&D	120	32x4	SS	.....	2185	.....	2585
COMET											LIBERTY										
C-53	6-3½x5½	Wagner	Wagner	125	32x4	SS	.....	2150	.....	.....	10-C	6-3½x4½	A.Kent	Wagner	117	32x4	SS	1695	1695	.....	2595
COMMONWEALTH											LOCOMOBILE										
4-40	4-3½x5	A.Kent	Dyneto	177	32x4	SS	.....	1395	.....	.....	48	6-4½x5½	Berling	Wsths	142	35x5	SS	†8200	.....	8100	11300
CROW-ELKHART											LORRAINE										
L-55	4-3½x5	Conn	Dyneto	111	32x3½	SS	1295	1295	†1445	.....		4-3½x5	Conn	Wsths	114	32x4	SS	†1425	1425	.....	.....
H-55	6-3½x5	Conn	Dyneto	117	33x4	SS	†1545	1545	.....	2395	McFARLAN										
CUNNINGHAM											127	6-4½x6	Wsths	Wsths	136	35x5	SS	5000	†4800	4800	6100
59-A	8-3½x5	Delco	Wsths	132	35x5	SS	†4250	*4750	4250	.....	MADISON										
DANIELS												6-3½x5	A.Kent	Remy	115	33x4	SS	.....	1550	.....	.....
D-19	8-3½x5½	Delco	Delco	132½	34x4½	SS	†4500	†4500	4500	6000	MAIBOHM										
DAVIS											B	6-3½x4½	A.Kent	Bijur	116	32x4	SS	.....	1395	.....	2100
51	6-3½x4½	Delco	Delco	120	33x4	SS	.....	1985	†2150	2985	MARMON										
DISPATCH											34	6-3½x5½	Delco	Delco	136	32x4½	SS	†4650	4600	4650	6250
G	4-3½x5	Bosch	USL	120	34x4	SS	†1250	†1290	.....	.....	MAXWELL										
DIXIE FLYER											25	4-3½x4½	A.Kent	Simms	109	30x3½	C	†985	985	.....	1655
	4-3½x5	Conn	Dyneto	112	32x4	SS	1465	1465	.....	1965	MERCER										
DODGE BROTHERS											5	4 4-3½x6½	Berling	Wsths	115	32x4½	SS	4950	†4950	*4950	.....
6-80	4-3½x4½	N.E.	N.E.	114	32x3½	SS	1085	1085	.....	1900	METZ										
DORRIS											Master, 6	6-3½x5	Conn	Wsths	117	32x4	SS	†1895	1895	.....	.....
6-80	6-4 x5	Bosch	Wsths	132	33x5	SS	.....	†4350	4350	5720	MITCHELL										
DORT											F-40	6-3½x5	Remy	Remy	120	33x4	SS	†1750	1750	.....	2600
	4-3½x5	Conn	Wsths	105½	30x3½	...	†985	985	.....	1535	MOLLER										
DUPONT												4-2½x4	Eisman	Dyneto	...	28x3	...	1100	†1150	.....	.....
	4-3½x5½	Bosch	.....	124	32x4½	SS	.....	4000	.....	.....	MONITOR										
ECONOMY												6-3½x4½	Dyneto	.....	117	33x4	...	.....	1525	†1575	.....
6-46	6-3½x4½	Conn	A-Lite	115	33x4	SS	†1795	1795	.....	2475	MONROE										
ELCAR											8-9	4-3½x4½	.....	A-Lite	115	32x3½	SS	1440	1440	.....	.....
4	4-3½x5	Delco	Delco	116	33x4	SS	†1395	1395	.....	2095	MOON										
6	6-3½x4½	Delco	Delco	116	33x4	SS	†1595	1595	.....	2295	6-48	6-3½x4½	Delco	Delco	118	32x4	SS	†1985	1885	.....	2885
ELGIN											6-68	6-3½x5½	Delco	Delco	122	35x5	SS	†2500	.....	2750	3650
6-K	6-3½x4½	Wagner	Wagner	118	33x4	QD	.....	1665</													

Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan	Model	Motor	Ignition	Starting Lighting	WB	Tires	Rims	2-Pass.	5-Pass.	7-Pass.	Sedan	
MOORE											REO											
30-F	4-3½x4½	A-Lite	A-Lite	110	30x3½	QD	.....	\$1095	.....	.....	1920	6-3 ⁹ / ₁₆ x5	N. E.	N. E.	120	33x4	SS	\$1650	\$1650	.....	\$2500
MURRAY											REVERE											
	8-3½x5	Dixie	Wsths	128	34x4½	...	.....	3500	.....	.....	A	4-4½x6	Bosch	Wsths	131	32x4½	SS	4250	4250	\$14250	.....
NASH											ROAMER											
681	6-3½x5½	Delco	Wagner	121	33x4	SS	\$1490	†1595	\$1640	\$2575	C-6-54	6-3½x5½	Bosch	Bijur	128	32x4	SS	2875	†2950	2950	3850	
NATIONAL											ROCK FALLS											
Sextet	6-3½x5½	Delco	Wsths	30	32x4½	SS	3500	†3500	3550	4700		6-3½x5½	Bosch	Wsths	136	35x5	SS	.....	.....	.....	.....
NELSON											SAXON											
D	4-3½x4½	Bosch	U.S.L.	104	32x4	SS	.....	1700	.....	.....		6-2½x4½	Remy	Wagner	112	32x3½	SS	.....	1785	.....	.....
NOMA											SAYERS											
I	6-3½x4½	Delco	Delco	128	31x4½	SS	2600	†2900	.....	.....	SIX-A	6-3½x4½	Delco	Delco	118	33x4	...	1745	1745	.....	2695
NORWALK											SCRIPPS-BOOTH											
	4-3½x5½	Delco	Dyneto	116	32x3½	SS	.....	1235	.....	.....	B-39	6-2½x4½	Remy	Remy	115	32x4	SS	†1425	1425	.....	2175
OAKLAND											SENECA											
34-C	6-2½x4½	Remy	Remy	115	32x4	SS	†1165	1165	.....	1825		4-3½x4½	Remy	Remy	108	30x3½	C	.....	1185	.....	.....
OLDSMOBILE											SINGER											
45-B	8-2½x4½	Delco	Delco	122	33x4½	SS	†2045	2045	2950	20	6-4	x5½	Bosch	Wsths	138	33x5	SS	†5800	5800	7800
37-A	6-2½x4½	Remy	Remy	112	32x4	SS	1395	1395	.....	1995	SKELTON										
OLYMPIAN																						
	4-3½x4½	Conn	A-Lite	116	32x3½	...	1240	1240	.....	.....		4-3½x5	Conn	Wsths	112	.....	SS	1245	.....	1245	.....
OVERLAND											SPACKE											
4	4-3½x4	A-Lite	A-Lite	100	30x3½	QD	945	945	.....	1575	S-20	2-3½x3.67A	Kent	.....	90	28x3	...	295	.....	.....	.....
OWEN-MAGNETIC											STANDARD											
W-42	6-4	x5½	Bosch	Own	142	35x5	SS	6500	7500	I	8-3½x5	A.Kent	Wsths	127	34x4½	SS	3000	†3000	3000	4800
PACKARD											STANLEY											
3-35					136	35x5	SS	.....	5550	.....	Steamer	2-4x5	.....	.....	130	34x4½	SS	.....	4275	4275	6100
3-25	12-3	x5	Delco	Bijur	128	35x5	SS	†5200	5200	5250	STEARNS											
PAIGE																						
6-39	6-3½x5½	A.Kent	G&D	119	33x4	SS	†1670	1670	.....	2395	SKL4	4-3½x5½	A.Kent	Wsths	125	34x4½	SS	†2350	2350	.....	3450
6-55	6-3½x5½	A.Kent	G&D	127	33x4½	SS	.....	†2300	2195	3095	STEPHENS										
PATERSON											Salient Six											
6-47	6-3½x4½	Willard	Delco	120	33x4	SS	.....	1695	1725	2600	6-3½x4½	A-Lite	A-Lite	122	33x4½	SS	2050	†1975	*2050	3050	
PEERLESS											STUDEBAKER											
56	8-3½x5	A.Kent	A-Lite	125	34x4½	SS	.....	†2900	2900	3700	E.H.	6-3½x5	Wagner	Wagner	119	32x4	SS	1785	1785	†1785	2585
PIEDMONT											E-G											
6-40	3½x4½	Remy	Remy	122	32x4	SS	.....	1865	.....	.....	6-3½x5	Wagner	Wagner	126	33x4½	SS	.....	.....	2250	.....	
4-30	3½x5	Delco	Dyneto	116	22x3½	SS	.....	1395	.....	.....	Light six	6-3½x4½	Wagner	Wagner	112	32x4	SS	†1635	.....	.....	.....
PIERCE-ARROW											STUTZ											
48	6-4½x5½	Delco	Wsths	142	35x5	QD	7650	7650	7750	9250	H	4-4½x6	Delco	Remy	130	32x4½	SS	3250	3250	3350	.....
38	6-4x5½	Delco	Wsths	134	34x4½	SS	†7250	7250	7250	8550	TEMPLAR											
PILOT																						
6-45	6-3½x5	Delco	Delco	120	32x4	SS	†1700	1650	.....	2500		4-3½x5½	Bijur	Bijur	118	32x4	SS	2685	2685	.....	3585
PORTER											VELIE											
	4-4x6½	Berling	.....	142	35x5	SS	.....	†9200	9400	.....	48	6-3½x4½	Bijur	Bijur	115	32x4	SS	1785	1785	†1950	2485
PREMIER											WESTCOTT											
6-D	6-3½x5½	Delco	Delco	126	32x4½	SS	4300	†4300	4300	5700	C-48	6-3½x5½	Delco	Delco	125	32x4½	SS	.....	2890	2890	4490
R & V-KNIGHT											C-38											
J	4-3½x5	Wagner	Wagner	115	32x4	QD	.....	2150	.....	2700	6-3½x4½	Delco	Delco	118	33x4	SS	2390	2390	†2790	3490	
R	6-3½x4½	Wagner	Wagner	127	32x4½	QD	3050	†3050	3050	3800	WILLYS-KNIGHT											
											20											
											4-3½x4½											
																					
											A-Lite											
											118											
											33x4											
											SS											
																					
											1750											
																					
											2550											
											WINTHER											
											61											
											6-3½x5											
											Wsths											
											Wsths											
											119½											
											33x4											
											SS											
																					
																					
																					
																					
											WINTON											
											25											
											6-3½x5½											
											Bosch											
											Bijur											
											132											
											35x5											
											SS											
											4250											
											3950											
											4250											
											5350											
											*6-passenger. †4-passenger. ‡3-passenger.											

ABBREVIATIONS.—“A.Kent” Atwater Kent, “A-Lite” Auto-Lite, “Conn” Connecticut, “G & D” Gray & Davis, “Eisman” Eisemann, “L.N.” Leece-Neville, “N.E.” North East, “Wsths” Westinghouse, “W. Lndr.” Ward Leonard, “SS” Straight Side, “QD” Quick Detachable, “C” Clincher “QDR” Quick Detachable Reversible. NOTE.—30x3½r means that the rear tires are 30x3½ and the front are smaller. ‡31x4 C tires on Sedan.

THE LATEST BRITISH CAR PRICES.

The following is a revised price list for 1920 of British motor cars available at the time of our March number. It now includes a list of all the principal British makes, and is as nearly complete as possible with the information at time of going to press.				BEAN.	4-cyl. 11.9 h.p. Two-seater, Open	...	...	£425
					Four-seater, "	...	...	450
					Two-seater, Coupé	...	...	500
					Four-seater, "	...	...	550
				BELSIZE.	4-cyl. 20.1 h.p. Chassis only	...	...	£450
					Two-seater Model	...	...	550
					Four- " "	...	...	620
					Coupé	...	...	770
					Landulet	...	...	830
				BRITON LIGHT CAR.	4-cyl. 9.9 h.p. Two-seater			
					Model	...	...	£395
				BRITON STANDARD MODEL.	4-cyl. 11.3 h.p.			
					Two-seater	...	...	£450
					Four-seater	...	...	475
				CALCOTT.	11.9 h.p. Two-seater	...	...	£475
					11.9 h.p. Coupé	...	...	550
				CALTHORPE.	4-cyl. 10.5 h.p. Two-seater Standard	375	guineas	
					Four-seater Standard	...	...	400 guineas
					Coupé	...	...	450 guineas
					Four-seater Sporting	...	...	400 guineas
				CHARRON.	Chassis only	...	...	£960
A. C.	6-cyl. Chassis only...	...	£550					
ANGUS-SANDERSON.	4-cyl. 14.3 h.p. Two-seater	...	575					
	Four- " "	...	575					
	Two- " Coupé	...	750					
ARMSTRONG-SIDDELEY.	"SIX." Chassis only	...	£720					
	Saloon Double Phaeton	...	1,000					
ARROL-JOHNSTON.	4-cyl. "Victory Model,"							
	Complete	...	£700					
	4-cyl. 15.9 h.p. Complete	...	625					
AUSTIN.	4-cyl. 20 h.p. Chassis Complete	...	£470					
	4-cyl. 20 h.p. Standard Model	...	595					
	4-cyl. 20 h.p. Four-seater Coupé	...	695					
	4-cyl. 20 h.p. Seven-seater Landulet	...	725					
AUTOCRAT.	Two-seater	...	£445					
	Four-seater	...	475					
	Coupé	...	500					

CHARRON-LAYCOCK.	Two-seater	460 guineas	PALLADIUM.	2-cyl. 10 h.p. Two-seater Model.	275 guineas
	Three-seater	490 guineas		Four-seater Model	295 "
	Coupé	540 guineas		Coupé	365 "
CROSSLEY.	4-cyl. 25-30 h.p. R.F.C. Chassis...	£950	PHOENIX.	4-cyl. 11.9 h.p. Two-seater Complete	£425
	Touring	1,200	RILEY.	4-cyl. Four-seater	£490
	Limousine Landaulet	1,400		Two-seater	465
	Coupé	1,400		Coupé	545
DAIMLER.	"Light 30" Chassis	£1,000	ROLLS-ROYCE.	6-cyl. Chassis only	£1,850
	"Standard 30" Chassis	1,060	ROVER.	12 h.p. Two-seater model	£700
	"Special 45"	1,300		Four-seater "	750
TALBOT-DARRACQ.	16 h.p. 4-cyl. Four-seater model	£750		Limousine Coupé	800
TALBOT-DARRACQ.	8-cyl. 20 h.p. Chassis	£950	ROVER LIGHT CAR.	8 h.p. Two-seater	£230
DAWSON.	4-cyl. 11 h.p. Two-seater	£475	RUSTON-HORNSBY.	Five-seater	£600
	Coupé	600	S. C. A. T.	4-cyl. 15 h.p. Chassis	600
DELAHAYE.	4-cyl. 14-18 h.p. Chassis only	£1,050	SINGER.	Two-seater Model	£400
	6-cyl. 18-22 h.p. "	£1,500		Two-seater Sporting	400
DEEMSTER.	4-cyl. 10 h.p. Two-seater	385 guineas		Coupé	500
	Coupé	400 "	SIZAIRE-BERWICK.	4-cyl. Four-seater	£1,650
	Four-seater	440 "	STAFFORD.	4-cyl. Four-seater	£405
DOUGLAS.	2-cyl. 10.5 h.p. Chassis only	£350	STANDARD.	9.5 h.p. Chassis only	£385
	Standard Body complete	400		Two-seater	425
D. F. P.	12.1 h.p. Chassis only	£675		Coupé	525
ENFIELD-ALLDAY.	5-cyl. 10 p.h. Two-seater	£350	STAR.	20.1 h.p. Four-seater, saloon top	£885
	" " Four-seater	350		15.9 h.p. Two-seater	670
ENSIGN.	6-cyl. 38.4 h.p. Chassis only... ..	£1,700		Five-seater	690
ERIC CAMPBELL.	10 h.p. Two-seater	£395	STOREY.	14.3 h.p. Chassis only	£525
GLADIATOR.	4-cyl. 12-14 h.p. Four-seater Model	£785		" Two/Four-seater	600
	Coupé	900		" Coupé	700
	4-cyl. 25-35 h.p. Coupé Saloon	1,200	SUNBEAM.	16 h.p. 4-cyl. Chassis	£850
G. W. K.	4-cyl. Two-seater	£275		Touring Car	1,125
	Four-seater	275		Limousine	1,275
GUY.	8-cyl. 20 h.p.	000		24 h.p. 6-cyl. Chassis	1,125
H. E. CAR.	4-cyl. 13.9 h.p. Chassis only	£550		Touring	1,400
	Complete, Four-seater	£700		Limousine	1,650
HAMMOND.	4-cyl. 11-22 h.p. Two-seater	£585	TALBOT.	4-cyl. 25 h.p. Chassis only	£950
HAMPTON.	4-cyl. 9.4 h.p. Chassis only	£360		4-cyl. 25 h.p. Five-seater	1,230
	Two-seater Model... ..	425		6-cyl. 30 h.p. Chassis only	1,050
	Four-seater "	465	THOR.	4-cyl. 15.5 h.p. Two-seater	£400
	Coupé Model	500		" " Coupé	450
HILLMAN.	4-cyl. Two-seater Model	£435	UNIC.	4-cyl. 13-24 h.p. Chassis only	£970
	Four-seater Model	495	VARLEY-WOODS.	Two-seater Model... ..	£540
	Coupé	505		Four-seater Model	660
HORSTMANN.	Two-seater Complete	£350		Coupé	760
	Four-seater "	385	VAUXHALL.	25 h.p. Chassis only	£950
	Coupé "	410		30 h.p. Chassis only	1,125
HUMBER.	4-cyl. 10 h.p. Two-seater Complete	£480	VULCAN.	16 h.p. Four-seater Model	£675
	4-cyl. 10 h.p. Four-seater	530		12 h.p. Light Car, Two-seater	500
	4-cyl. 10 h.p. Coupé	£575		Four-seater	525
	4-cyl. 15.9 h.p. Five-seater	750	WAVERLY.	4-cyl. Chassis only	£450
	4-cyl. 15.9 h.p. Saloon	£1,010		14 h.p. Five-seater Model	575
LANCHESTER.	40 h.p. Chassis	£1,500		Saloon	750
MARLBOROUGH.	Two-seater... ..	£550	WOLSELEY TEN.	4-cyl. Two-seater	£500
MASCOTTE.	Three-seater Model	£450		Three-seater	585
	Two-seater, Polished aluminium body	575		Coupé	600
	Coupé	675	WOLSELEY FIFTEEN.	4-cyl. Touring	£800
METEORITE.	Chassis Complete	£375		Saloon	1,000
	Two-seater model	450	WOLSELEY TWENTY.	6-cyl. Touring de luxe	£1,150
	Four-seater	575		Landaulet	1,400
MORRIS-COWLEY.	Two-seater	£315		Coupé	1,450
MORRIS-OXFORD.	4-cyl. Two-seater Complete	£380	ZEPHYR.	4-cyl. 11.9 h.p. Chassis Complete	£350
	Four-seater	415			
	Coupé	475			
NAPIER.	6-cyl. 40-50 h.p. Chassis only	£1,750			
	Landaulet	2,450			
	Sporting Torpedo	2,240			
	Cabriolet	2,340			

HAUL BY TRUCK



WHEN YOU BUY A MOTOR CAR, BE SURE YOU JUDGE WISELY.

Every experienced Motorist knows that the continual use of a cheap Motor Car means endless and expensive repair bills.

The Engine, the most important part of a Motor Car, receives too little thought on the part of the average Car buyer.

Some people in Shanghai are making mistakes by judging a Motor Car by its appearance, color of paint, instead of judging by its Motor.

The Chandler Motor has proved that it has stood the test of years. Its enviable record of quality is due to the fact that its Engine has power and speed and it gives no trouble.

The Chandler is the choice of the man who respects the mechanism of his Car. Ask Chandler Owners and then judge for yourself.

Seven Passenger
Touring
Price Tls. 2200

Max Friedman
Sales Manager.

THE SHANGHAI GARAGE CO., LTD.

OPERATING

THE STAR GARAGE AND THE EASTERN GARAGE.

Our Main Show Room, Star Garage 125, Bubbling Well Road, Shanghai.

MOTOR CAR INSURANCE

THE COMPREHENSIVE POLICY

OF THE

ALLIANCE ASSURANCE

COMPANY, LIMITED

(ASSETS OVER £24,000,000)

Affords **FULL COVER** to Motorists,

INCLUDING—

**LIABILITY TO THIRD PARTIES.—
DAMAGE TO, OR LOSS OF, CAR**

(including lamp and accessories) by—

Collision or other Accident,

Fire, Lightning, Explosion or Self-Ignition,

Robbery or Theft or any attempt Thereat,

Malicious and Wilful Acts by any Persons.

MEDICAL & SURGICAL EXPENSES

ADDITIONAL BENEFITS

Can be included in the Policy by Arrangement.

ABSOLUTE SECURITY

**PROMPT AND LIBERAL SETTLEMENT
OF ALL CLAIMS.**

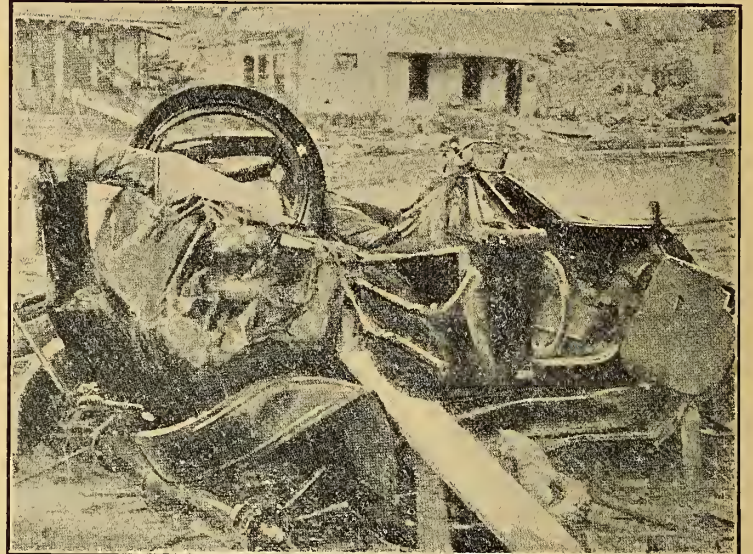
AGENTS—

**JARDINE, MATEHSON & Co., Ltd.,
SHANGHAI,**

AND AT

TIENTSIN, PEKING, HANKOW, TSINGTAO.

A TORN-DOWN MOTOR CAR.



A cyclone is responsible for this dismantled machine; the sides are battered in, the stuffings coming out, two unharmed tires are sitting in the back seat, and the engine has completely disappeared. Could an actual collision do more?

PNEUMATIC TIRES BEST FOR TRUCKS.

Expert Gives Fundamental Reason Why Air Cushions Are
Better than Solid Rubber.

By An American Tire Expert.

THE REASONS.

1. Reduces consumption of gasoline and oil.
2. Increases operating radius or miles truck will travel per day.
3. Lessens truck depreciation.
4. Reduces repair bills.
5. Lessens breakage on fragile loads.
6. Increases driver's or passengers comfort.
7. Gives added traction on bad roads.



These seven fundamental reasons, as stated briefly above, why pneumatic truck tires are the most logical equipment of motor freighters are not based on theory alone but the result of experiments on all types of roads and with all sizes of cargo and passenger trucks. They all sum up to

The Upkeep Counts for Nothing

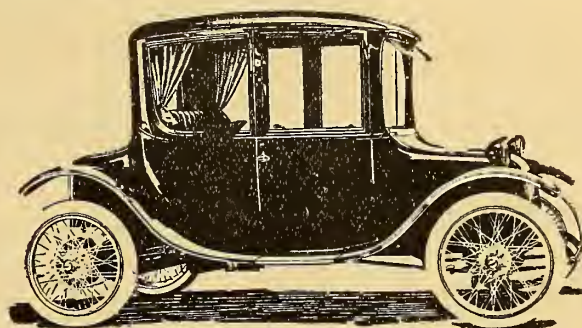
When you can secure the desired results with a simple mechanism why use a complicated one?

The streets of Shanghai offer nothing that cannot be fully met by a simply constructed car of the Milburn type. Traffic conditions place it on a level with a gasoline car so far as speed is concerned and it is superior in the point of upkeep.

The few parts in the construction reduce the number of auto troubles and lower the cost of repairs.

Milburn Electrics are daily adding to their friends in Shanghai, by reason of the few demands they make on their owners' time and attention.

Milburn
LIGHT ELECTRIC



Andersen, Meyer & Co., Ltd.

SHANGHAI

7 Yuen Ming Yuen Road

Telephone Central 778

Canton, Hankow, Hongkong, Peking, Tientsin and Tsinan.



M 12

mean to the operator of the truck a lower cost per ton mile for maintenance which after all is the object of all efficient trucking services, either for private or public carrying.

The pioneers in the manufacture and use of the pneumatic tire for motor trucks was the Goodyear Tire and Rubber Company. Before attempting to place before the truck owning public a pneumatic tire for such a vehicle, the company conducted a series of experiments using the tires on their own factory vehicles. The first tires used were of fabric construction and were proven to be unfit for such work, but from these was evolved the present successful cord pneumatic truck tire.

Following the lead of the Goodyear experiments truck manufacturers began to investigate the possibilities of pneumatic tires. This led a number of the most widely known manufacturers of the United States to build the present day special models equipped with pneumatic tires exclusively. The latest development in the truck field of America for the year of 1920 is the offering of pneumatics as an optional equipment. These makers although not entirely abandoning the hard tire have come to realize the public demand for pneumatic saving and efficiency.

An illustration of the possibilities of the making of trucks with this equipment may be pointed out by the fact that in the past a motor freighter with a capacity of three

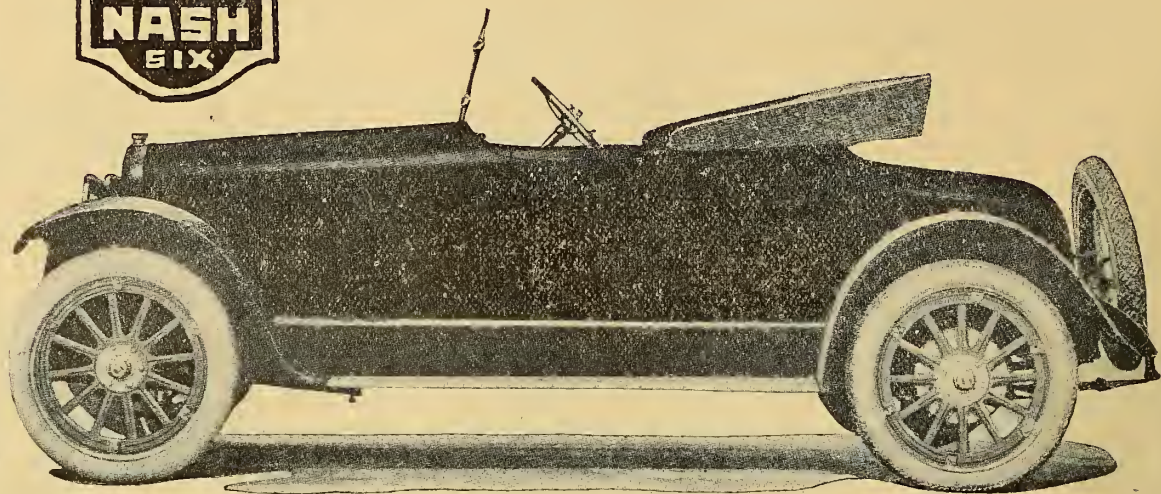
tons weighed ten to twelve thousand pounds. This enormous weight in construction was made necessary in order that the truck might withstand the vibration created by the use of hard tires.

The Goodyear Tire and Rubber Company, as an example of what may be done, is now operating a three-ton truck with a five ton body and has had several experimental five-ton trucks manufactured where the weight of the truck will not exceed the pay load, all equipped with pneumatic truck tires. These trucks are giving more than satisfactory service both in city and cross-country hauling.

The conclusion which may be arrived at by the above mentioned experiments, developments and reasons is that this all means that the progressive truck operator and dealer should investigate the advantages of pneumatic truck tires before specifying the tire equipment in ordering new vehicles.

The exports of motor cars and accessories from the United States during last November totalled \$14,965,539, a gain of approximately \$7,000,000 over the same month of the year previous but a loss of approximately \$200,000 as compared with October. The total number exported in November was 9,395, of which 7,683 were passenger cars and 1,712 trucks. The United Kingdom led as a market.

**THE
FAMOUS
NASH
SIX
IN
FIVE
MODELS**



Two Passenger Roadster.

Four Passenger Sport Model,
with wire wheels.

Seven Passenger Touring Car,
with two disappearing auxilliary seats in
tonneau.

Coupe,

with windows lowered an open car with
permanent top, four passenger capacity.

Sedan,

windows lowered for pleasant weather
driving seven passenger capacity.

Sole Agents for China

WAH CHANG TRADING CORP.

9 Ningpo Road, Shanghai.

'Phone C. 4461

Tel. Ad. 7006



1920 MAY SEE NEW SPEED RECORDS.

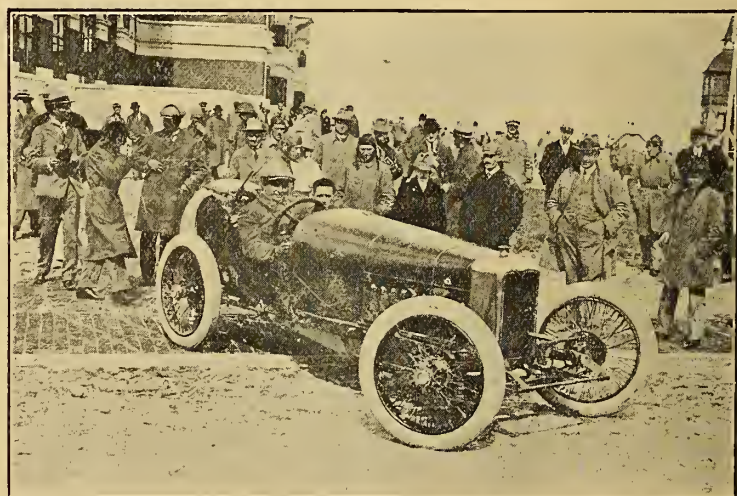
Fanoe Island, Denmark, to Come into Prominence as a Race Course.

There are indications that many of the old motor speed records, which have been undisturbed since the war, will be seriously threatened during the year 1920. Although France and England have decided not to hold any official races until 1921, leaving the sporting program in the hands of Italy and America, manufacturers are not unmindful of the value of speed contests or demonstrations, and many of them are making preparations.

In order to attain the highest possible speed, a special course must be provided. Both the road and the track are generally unsuitable when it is desired to attain the maximum speed over a minimum distance. America is fortunate in having the beach at Daytona, Florida, where the speed records have always been established in the past. In France the roads have been made use of, but owing to their deterioration since the war, and the great increase in the maximum speed, these are no longer suitable.

During the past year the beach at Fanoe Island, Denmark, has been revealed as an excellent place for speed trials. One meeting was held here during the late summer, when the Grand Prix Fiat, driven by Minoia, made the best showing. Beating all competitors, this car attained a maximum speed of 105 1/2 miles an hour average for 5

kilometers. This, however, must not be looked upon as the highest speed obtainable; the Fiat could have done better if it had been possible to wait for the ideal conditions.



Minoia, Italian Speed King, with Grand Prix Fiat on the Beach at Fanoe Island, Denmark.

obtainable with a perfectly smooth surface and an entire absence of wind. The run was made under competitive conditions and was a fine performance under the circumstances.

**Guaranteed
5,000 Miles**

**THE
PERFECT
NON-
SKID
TYRE**

"MICHELIN UNIVERSAL"

Resilient and ECONOMICAL. Improves the appearance and running of your car.

A large shipment just arrived ex. French Mail. 935 by 135, 835 by 135, 920 by 120, 880 by 120, 850 by 120, 820 by 120, 37 by 5, 34 by 4 and all other sizes including Fords.

The owner of a Ford Car should have a set fitted and forget that his car runs on rubber tyres. They seem to last indefinitely.

THE AUTO PALACE Co., *Sole Agents.*

362 Ave. Joffre, SHANGHAI. Tel. W. 465

Practical Motor Engineers and Dealers.

You know that our advice has never failed you.
We now tell you that you should fit the new cover.

The value of this beach for speed contests has not been overlooked and it is more than probable that it will be used during the present year for attempts against existing records. If rumors are reliable, special freak cars are now under construction and will be seen during the year on the beach at Fanoe Island. One of the records to be attacked will be that established by Duray, at Ostend in November 1913, on a special Fiat. This car, which was the property of a Russian Prince, was the most powerful racing machine in the world before the war. It had a 300 h.p. engine and had attained a speed of 142.9 miles an hour for the flying kilometre.

The French airman, Lecointe, reputed to have been the first to guide an airplane over a three-mile course in one minute's time, has now been chosen to pilot, on its trial trip, the world's largest plane. Unfortunately a detailed description of the big craft cannot be secured from the manufacturers at this time. It is divulged, however, that the wing span is 175 ft., which exceeds by 49 ft. the measure of the famous Handley Page four-engine bombers. Despite its size, the ship is expected to attain a speed of 120 miles an hour.

Chicago Show Brings Total Shortage Up.

(Continued from Page 10).

in all directions. The cross-member construction is most unusual. The rear of the engine, for example, is mounted on a cross-member of channel section, which is bracketed to the lower edge of the frame, but extended outward on either side to form the forward running board support. The frame, tapering to the front, the body and hood lines are carried out in harmony with it, thus affording an exceedingly wide board, which tapers slightly toward the rear. Another frame feature of merit is the intermediate cross member, which is so contrived as to serve the purpose of a battery box.

Advantages inherent to a one-chassis program have been adopted for the new Allen line, on which are mounted touring, roadster and sedan bodies, respectively. The line is new, in the mode and decidedly attractive. The power plant has been undergoing development during the past two years, while in addition to the attractive body designs, which are entirely new at this time, there have been made numerous changes all the way through.

NORTH BRITISH
AND
MERCANTILE INSURANCE CO.
MOTOR CAR INSURANCE

MODERATE RATES
AND
COMPREHENSIVE CONDITIONS
INCLUDING
UNLIMITED THIRD PARTY LIABILITY.

AGENTS:—

E. D. SASSOON & Co., 9 Jinkee Road

MANAGER:

E. E. PARSONS, 12 Hankow Road
SHANGHAI.

HIRE CARS
MORIMURA GARAGE Co.

N. 2938—Telephones—N. 2939

I. 13 North Soochow Road, Shanghai

MOTOR CAR & MOTOR CYCLE
Repairing & Overhauling

All kinds of Rubber Goods
GOODRICH TIRES

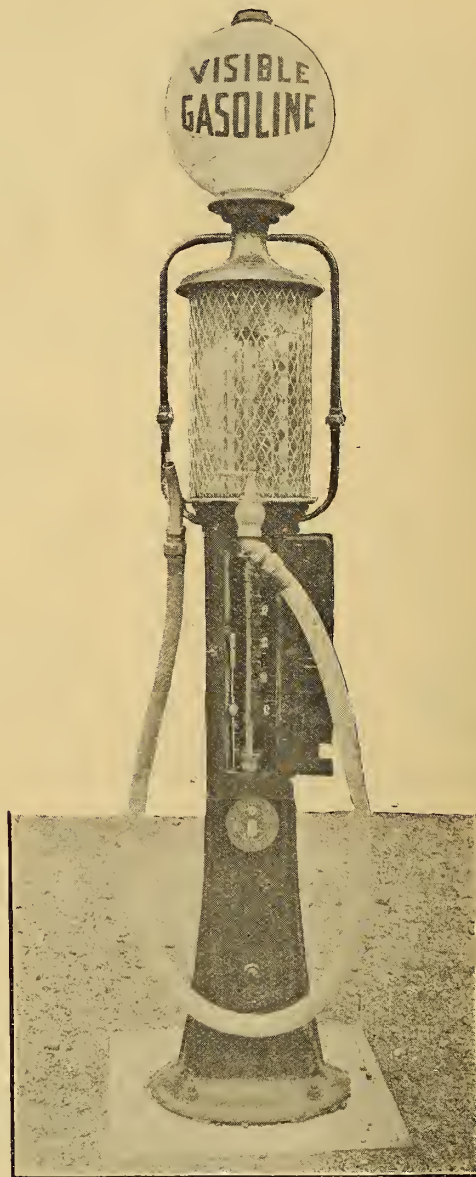
Show Room: 137 Chapoo Road.

ARE YOU SUBSCRIBER
TO
THE ORIENTAL MOTOR
IF NOT

Why Not Subscribe To-day?

MEASURING GAS IN SIGHT.

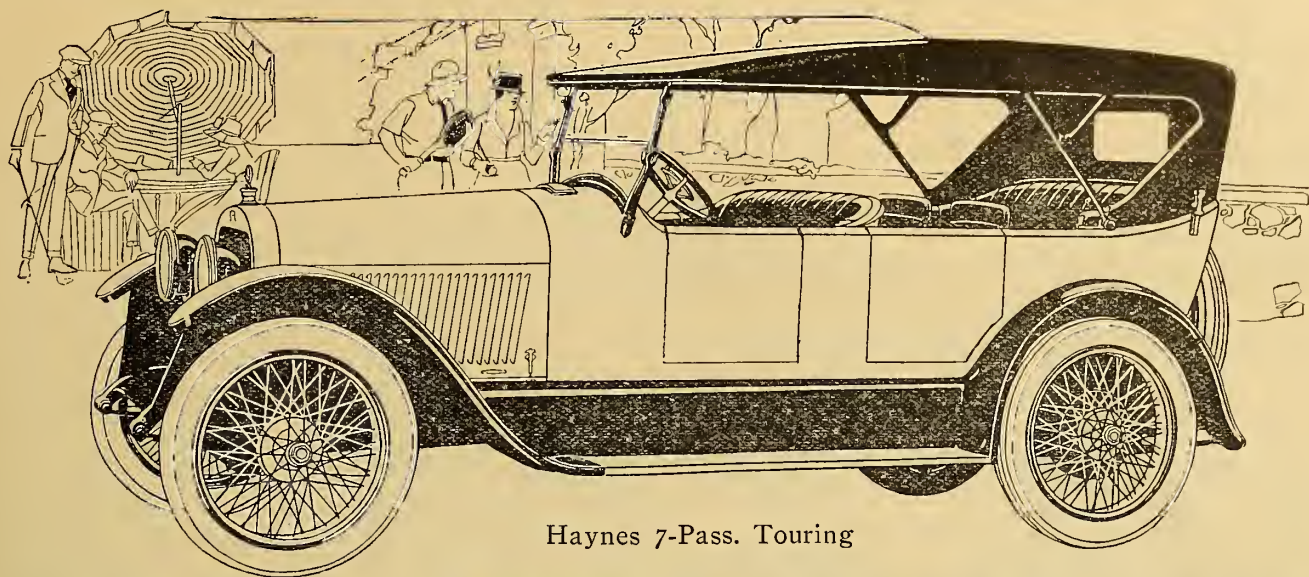
Star Garage Installs First Visible Pump in Shanghai.



The first visible gasoline pump, where the fuel is measured as it flows out in view of the purchaser, to be installed in Shanghai has recently been erected at the Star Garage on Bubbling Well Road.

The pump is electrically operated and controlled. A vacuum pump creates the suction necessary to bring the gasoline from the ground tank into the measuring tubes. A glass container at the top of the pump holds the fuel until a sufficient quantity has been drawn and is also equipped to permit the gasoline remaining to flow back into the storage tank.

The outfit is one which has found wide popularity in the United States with the chain gasoline filling station system operators.



Haynes 7-Pass. Touring

THE WELL KNOWN HAYNES CARS

5 and 7 Passenger Touring and Roadster Models

IN STOCK

We always have a good stock of Used Cars—best makes only. We also have for immediate delivery a number of Motor Trucks in various capacities ranging from 1½ to 3½ Tons.

Phone C. 402

AUTO CASTLE 228 Avenue Joffre

DUNLOP ANNOUNCES AMERICAN PLANT.

SHANGHAI HAS MOTOR WORKERS' UNION

**Huge Factory in New York State, Including Cotton
Fabricating Mills to Cost \$25,000,000.**

**Walking Delegates Attempt to Institute Strikes at Various
Garages.**

Entrance into the motor tire manufacturing field of the United States on a gigantic scale has been announced in that country by the Dunlop Tire Company of Great Britain. The announcement states that a huge plant, which will include cotton fabricating mills for the manufacture of cord fabric, will be constructed at Buffalo, New York, at a cost of approximately \$25,000,000. The new company, which has been incorporated under the name of the Dunlop America Limited, will take over all of the rights of the original American Dunlop Tire Company and will have an influential American element on its board.

The announcement comes as one of three striking developments in the relations of Anglo-American manufacturers, the Rolls-Royce having recently located a plant at Springfield, Massachusetts, and the Willys-Overland Corporation having combined with the Crossley interests for the manufacture of motor cars in England.

The American Dunlop Tire Company, founded by the original company to exploit the pneumatic tire in the United States, manufactured Dunlop tires there for a number of

The spread of Western motoring ideas and motor cars to China has been followed by a spread also of Western labor ideas as was shown in a recent case in the Shanghai Mixed Court brought by the Shanghai Horse Bazar and Motor Company, Ltd., and the H. S. Honigsberg Company against three Chinese workmen charging them with inciting strikes and also with the purloining of tools in order to cripple operations.

The organization for the most part, according to the evidence introduced, was spread among the painters and coachworkers. Modern methods, including coercion and threats, the attorneys declared, were used by the walking delegates to such an extent that in one garage despite the efforts of the manager to come to a settlement only 200 out of a staff of 500 were at work.

The case was remanded for the British Assessor and bail of \$100 was allowed for the defendants.

years, and was merged in a large consolidation after the parent company had sold its interest in it over twenty years ago.

ESSEX GOES MILE A MINUTE.

Stock Models Hit Fast Clip in Recent Tests at Cincinnati.

A series of tests on the Essex car, calculated to demonstrate its durability and performance, have recently been completed on the Cincinnati Speedway by the Essex Motors. The tests were run to conclusion in spite of two interruptions due to inclement weather conditions, during the period from December 4 to December 12. The actual time spent in making the tests, including necessary stops, was 93 hours, during which a distance of 5,870 miles was run.

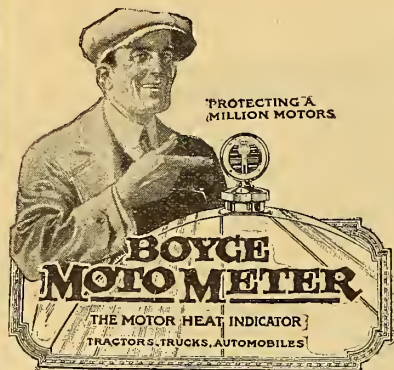
The test were run under the sanction of the A. A. A. and the car was continually under observation by the A. A. A. officials. The car was certified by technical observers to be stock in every particular and timing of the trials was accomplished by the electrical timing instruments, checked by stop-watch observation.

As these figures have never been exceeded for cars in this displacement class, according to Essex officials, application for records will be filed with the A. A. A. The Essex engine has a displacement of 179 cu. in., being a four-cylinder type with $3\frac{3}{8}$ by 5 in. cylinder dimensions. The car had the standard gear ratio of $3\frac{1}{2}$ to 1 and was fitted with 32 by 4 in. Goodyear cords, inflated to 70 lb. pressure. The front tires covered the entire distance of 5,870 miles, and but two changes were made on the rear, these being due to punctures from track splinters and not on account of wear.

The equipment of the car includes A-C spark plugs, Delco ignition, starting and lighting, Sparton vacuum fuel feed, Spicer universals, Hyatt bearings for the gearset, Gemmer steering gear, Timken bearings for wheels and axles, Harrison radiator, Boyce motometer, and Houck wire wheels. The dash, cowl and instrument board were left in place, but the windshield glass was removed in accordance with A. A. A. rules for stock car tests. The top and body deck were also removed, but no change was made in the contour of the car to affect the entrance line in any way. The car had a 12 gal. gasoline tank which necessitated a stop at about every 136 miles.

The last 50 hours included a 2 hour stop during which it was necessary to change a cylinder block which had cracked through water freezing in the bottom of the jacket, during the interval between the December 8 and December 10 tests. The crack developed during the first part of the 50 hour run causing irregular performance which made it advisable to change the cylinder block. The 2 hours required for this change is included in the 50 hour run, but not in the 36 hour. This accounts for the 4 m. p. h. difference in average speed. It was necessary to change two plugs in No. 1 cylinder. These plug changes being necessitated by the misfiring due to the cracked cylinder block.

BOYCE MOTO METER



WILL SIGNAL YOU

When you are obtaining the best gasoline efficiency.

When your motor is cold and inefficient.

When you must stop your car for cylinders and bearings overheating.

When you should cover your Radiator to prevent freezing.

In cold weather it will also show you when the motor is

wasting from 30% to 40% of gasoline, and how much to cover your Radiator to prevent this waste.

All Models in Stock

Standard, Universal, Junior, Midget, Ford and Overland Models.

Avoid Over-cooling

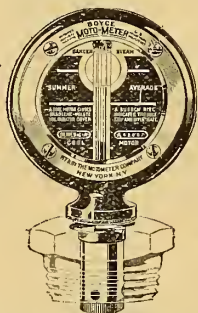
Avoid Over-heating

Save your Gasoline

Save your Engine

Low in Price

High in Efficiency



YOUR CAR DESERVES ONE

Inexpensive to buy.

Easy to install.

DONG CHONG BICYCLE CO.,

P. 346 Nanking Road, SHANGHAI, Phone C. 1518.

INSURANCE

Fire, Marine, Life,

Accident and Sickness.

Fidelity Guarantee

AND

MOTOR CARS

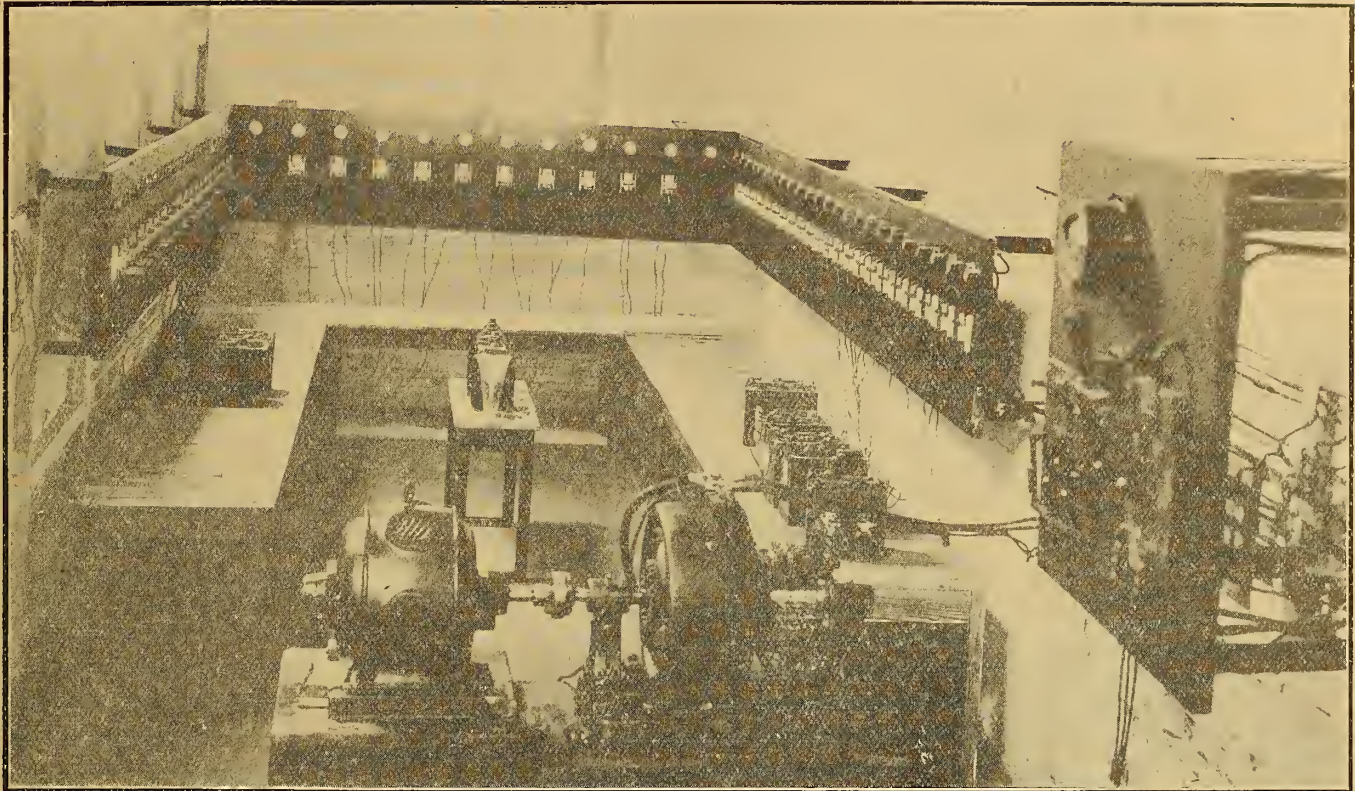
**Commercial Union
Assurance Company, Ltd.**

Total funds exceed £32,000,000.

China Branch Office;

UNION BUILDING.

4, The Bund, Shanghai.



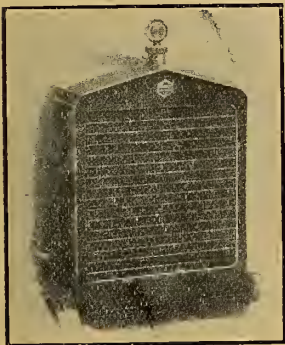
IF YOU WANT **REAL BATTERY SERVICE** SEND YOUR CAR TO US.

THE CHINA GARAGE Co.

21 FOOCHOW ROAD.

SHANGHAI.

TEL. C. 2403.



*Essex Radiator Showing
Radial Plate Shutter
Construction.*

Inspection of the car after the run showed inappreciable wear in the cylinder bore and on the pistons, but disclosed the fact that present-day valve material has not as good heat resisting qualities as previous products have been when it was possible to secure a higher tungsten content. This fact excited a great amount of interest among the Essex and Hudson engineers who were present at the test. The test was held as much for the purpose of demonstrating the staying qualities of the car, as to furnish a means of technical observation for the Essex engineering staff.

The average temperature was about 30 deg. Fahr., necessitating the use of the shutter equipment, which proved to be valuable in properly regulating the circulating water temperature. The minimum temperature on the track was 18 deg. Fahr. The observers were Fred Wagner, F. E. Edwards, R. A. Leavell and J. Edward Schipper.

ESSEX TESTS.

Date. Dec.	Distance. Miles.	Time.	Av. m.p.h.
4	69.255	1:00:00	69.255
4	819	12:00:00	68.25
4-5	1790	27:57:00	*
8	1042	16:25:40	†
10-11-12	3037.24	50:00:00	60.74
10	1539	24:00:00	64.13
10-11	2329.51	36:00:00	64.6
10-11	2912	48:00:00	60.66

* Stopped for snow.

† Stopped for rain.

MOTOR TRUCK SERVICE

'Phone North 2379



We can prove to you that you will not only save time but money as well by using our Truck Service.

**NOTHING
TOO BIG OR TOO SMALL**

Special Facilities for Handling
HEAVY CARGO

**A Big Factor is Safety in Transit
which we Guarantee.**

Let us Estimate on your Cartage
DAY AND NIGHT SERVICE

Commercial Transportation Co.
698 Tiendong Road, Shanghai.

AUTO ENGINES RUN HAYNES FACTORY.

**Kept Factory Wheels Turning During Coal Crisis when
Electric Power was Curtailed.**

When so many other industries were forced to shut down because of the recent national coal shortage, the famous "light six" Haynes motors, built by The Haynes Automobile Company, Kokomo, Indiana, again proved their efficacy by enabling the Haynes company to continue producing automobiles. And although the supply of motive power, furnished by a local utilities corporation, was seriously curtailed, the Haynes factories were kept going by harnessing a number of Haynes motors to the various drive shafts throughout the shops. Day after day, for a whole week, these rugged engines supplied the energy for turning the factory wheels.

When the fuel crisis became acute, the utilities company which furnishes the power to most of the factories in Kokomo, decided to cut off the supply for a number of days. This meant a shutdown for the Haynes company just at a time when every effort was being made to increase production to meet the world-wide demand for Haynes character cars. It meant temporary non-employment for the many hundreds of men. The situation demanded immediate action.

A suggestion was made to use the Haynes motors to run the factory machinery. It was acted upon at once and in a few hours the engines that had been built to drive automobiles were at work turning the wheels of industry. The load was a heavy one and the run was long, but the motors did not develop the slightest sign of trouble. They purred along in the same even tenor of their way that has won for them the enthusiastic approval of thousands of motorists.

Meanwhile another gang of men was rapidly changing the fuel for heating the boilers, from coal to oil. This was in the further interests of coal economy. By nightfall the oil burners had been installed and the entire Haynes factory was being operated without the use of coal. As soon as it was seen that the change was proving successful, Mr. A. G. Seiberling, Vice President and General Manager, turned over to the public utilities company a vast quantity of coal to be used for public purposes.

MANY U.S. PLANTS TO INCREASE OUTPUT.

Some factories have announced production figures for 1920, including the Overland, which has set 200,000 as the mark; Hup, 24,000; Columbia, 15,000; Hudson, 30,000; Essex, 40,000 Saxon, 12,000.

Over \$1,500,000,000 has been invested by 550 builders of finished motor cars and trucks in the United States.

ANNOUNCING
OUR OPENING WITH A COMPLETE LINE
OF
AUTOMOBILE ACCESSORIES

Our Specialties:

- | | |
|----------------------|-----------------------|
| Goodyear Tires | Kor-Ker Puncture Cure |
| Hel-Fi Spark Plugs | Boyce Moto-Meters |
| Hercules Spark Plugs | Klaxon Horns |
| Chain Jacks | Spot Lights |

ALL SIZES OF  **GOOD YEAR** TIRES IN STOCK

**A TIRE GUAGE FREE
TO ALL TIRE PURCHASERS**



Automotive Supplies Co.

602-3 Thibet Road, Cor. Ave. Edward VII
SHANGHAI



What and Where Is That Thing?

(From page 9).

support part of the load. The general construction of the three-quarter axle is similar to that of the floating, except that the shafts in being rigidly attached to the wheels are made to carry some of the load as well as turn the wheels.

GEAR RATIO.

Under this heading the figures refer to the ratio of the engine revolutions to rear wheel revolutions in high gear. For example, where 4.50 appears it indicates that with the car in high gear the engine makes four and one-half revolutions to one of the rear wheel.

HOTCHKISS DRIVE.

The turning of the rear wheels must push the rest of the vehicle through some medium, and the twist or torque of the rear axle, must be absorbed by some part. In the Hotchkiss drive, the torque strain and the driving or pushing strain are both given over to the rear springs.

SPRINGS.

Of the nine distinct type of motor car springs the most popular is the semi-elliptic, which is referred to in tables by

the abbreviation semi. This form of spring has the shape of half an ellipse as may be seen from the accompanying illustration. Two semi-elliptic members linked together to form a complete ellipse, comprise the elliptic construction. From these brief definitions of the elliptic and the semi-elliptic types the construction of three-quarter elliptics will be obvious. Although the cantilever has the appearance of a semi-elliptic spring the action is far greater since the spring is pivoted at a center point with one end attached to the frame and the other to the axle.

This type of cantilever could be correctly called the semi-elliptic cantilever since the spring is of the semi-elliptic type. The construction of the quarter elliptic cantilever, then, is obvious. Although in all of these constructions the springs run lengthwise of the frame, there are a number of instances in which cross or transverse members are used and of which the Ford is the best example. This construction may be compounded as in the case of the Marmon, in which two semi-elliptic transverse springs are placed back to back. The platform type of spring suspension employs two semi-elliptic side members to which a semi-elliptic transverse member is shackled.

MOTOR CAR GEAR CHANGING AS A FINE ART.

INSURANCE

REDUCED RATES
AND
SPECIAL CONDITIONS

GENERAL

ACCIDENT, FIRE AND LIFE
ASSURANCE
CORPORATION, LIMITED.

For prospectus apply to the

FAR EASTERN MANAGER,

4A PKING ROAD, SHANGHAI.

or WHEELOCK & Co., French Bund.

SHANGHAI HORSE BAZAAR AND MOTOR COMPANY, LTD.

Exclusive Agents For :—

FIAT CARS

BERLIET CARS

STEARNS CARS

STUDEBAKER CARS

SCRIPPS-BOOTH CARS

ARROL-JOHNSTON CARS

THORNYCROFT TRUCKS

UNITED STATES TIRES

SAVAGE TIRES & TUBES

PREST-O-LITE BATTERIES

STEWART-WARNER PRODUCTS

And various lines of Accessories.

SHANGHAI

36 Bubbling Well Road

'Phone W. 1641

**A Little Study Will Help to Always Make a
Smooth Getaway.**

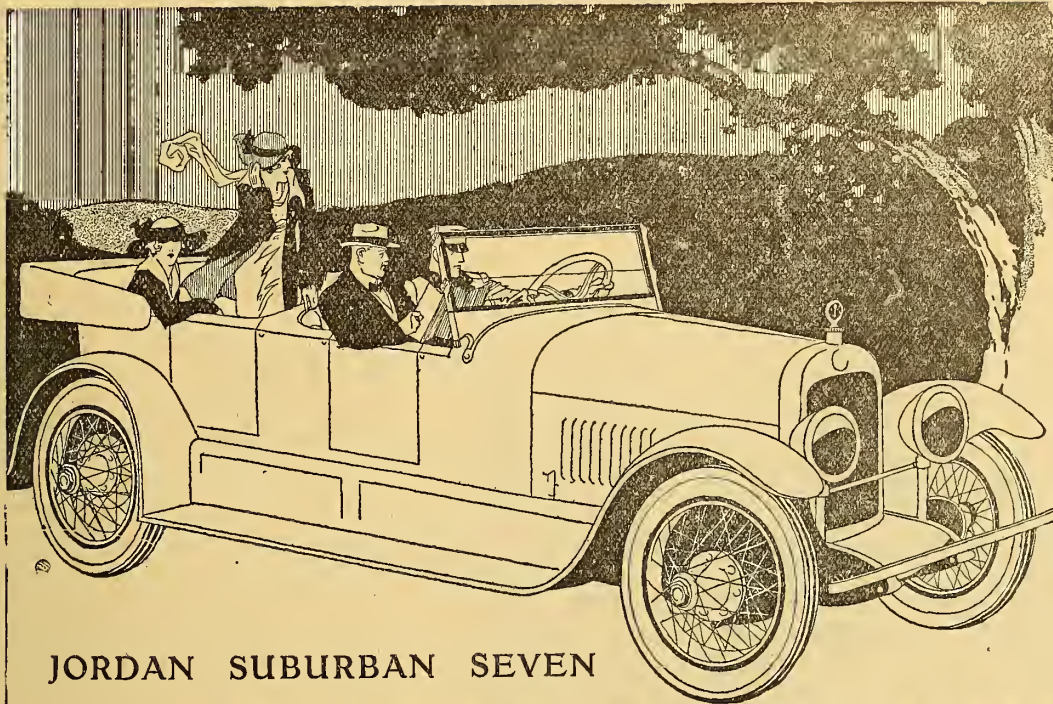
Mr. Motorist, have you ever envied the automobile driver who pulls away from the curb with never a clash of the car's gears? Who knows exactly when to shift the gear lever and who does it so quietly that it seems to you, sitting beside him, that his car hasn't any gears at all. Of course you have; but why envy him when you can do the same with your own car if you will only find out what happens in the transmission under the floor-boards.

The design of the transmission and clutch has much to do with successful gear shifting, but however perfect the mechanism may be a certain amount of practice is necessary to shift the gears without the ends of the gear teeth striking together. It is this clashing of teeth that makes the grinding noise which makes your repair man welcome you so cordially when you pull up for oil or gasoline. He knows that, as a result, sooner or later you will have to put your car in his workshop—hence his smile. Ignorance of the proper way to shift gears results in the gradual wearing away of the teeth, and, in extreme cases, strips them from the bodies of the gears. In every case a noisy transmission results. The transmission is made up of a series of gears, mounted upon a main shaft and a counter shaft, with an idler gear mounted upon the transmission case. The first and second speeds and reverse are three sets of reduction gears with various ratios. High speed is on direct drive, which means that the drive-shaft to the rear wheels revolves at the same speed as the engine crank shaft.

When the clutch-pedal is pushed down (or "out," in automobile parlance) the engine is disconnected from the transmission, which releases the pressure of the gear teeth against each other and allows the gears to be shifted easily. The lower end of the shift lever connects with the gear shifting forks, which are so arranged as to push the gears forward and backward on the square main shaft in order to make the different gear combinations.

Here is the whole secret of successful gear changing. The two gears about to be meshed should be revolving slowly and as nearly as possible at the same rate of speed. If one of the gears is revolving much faster than the other it is impossible to shift them without a clash. It is therefore a mistake to let the car gain too great a speed before shifting into a higher combination.

Now, when the car is under way, pull down the hand throttle and take your foot off the accelerator so that the engine idles slowly, throw out the clutch, pull the lever from first speed, then clear to the left and into second speed. Let the clutch in gently and push down the accelerator until the car attains a speed of eight to ten miles an hour, when the clutch should again be disengaged, the foot removed from the



**DUE SHORTLY
COMMONWEALTH
MITCHELL
JORDAN
MOTOR CARS**

JORDAN SUBURBAN SEVEN

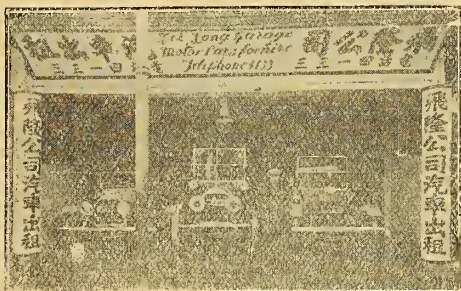
THE FEI LUNG COMPANY

OPERATING

THE FEI LUNG GARAGE

**HIRE
SERVICE**

153-4
Hupeh Road
Phone C. 4133



SHANGHAI AUTOMOBILE Co.



SHOW
ROOMS
AND
SHOPS
F. 1787
Bubbling
Well
Phone W.
933

**RED SPOT SEARCHLIGHTS
FORD PARTS**

**GOOD YEAR
TIRES**

**INDIAN MOTOR CYCLES
1 & 2 Cylinder IN STOCK**

accelerator and the lever pulled straight back into high position. All these motions should be made deliberately and without haste. Usually the driver is in too much of a hurry to make the shifting smooth. Don't grasp the lever tightly in your hand—this does not help the shifting one bit and only makes you tired. By moving the lever backwards with the tips of the fingers the driver can actually feel when the gears are turning at the right speed and mesh them quietly. When the lever is gripped tightly this is impossible.

But in heavy pulling or on an up-grade, where the car will slow down the instant the accelerator is released, the gear shifting must be made quickly and firmly in all speeds.

Shifting from high to second or low speed is just the reverse of these motions, except in the handling of the accelerator. The principle of the thing is to make the shift as quickly and firmly as possible so as not to let the gears slow down. The clutch pedal must only be pressed down far

enough to barely release the clutch. Never attempt to put the shift lever in reverse nor shift from reverse to a forward speed until the car is at a standstill. If you do an enormous strain is thrown upon the entire mechanism.

In starting the car on a steep hill hold down the brake with the right foot, put the shift lever in first speed and use the hand throttle to get away, releasing the brake slowly as the engine takes up the load; and when starting down a grade put the lever in first or high speed and let the momentum of the car start the engine. This economizes upon the battery and does no injury to the car.

If you follow the above rules and conscientiously study the peculiarities of your own particular car (for every car has its own likes and dislikes exactly as would a horse) you will soon become an expert driver and operate your car automatically and with precision. Try it and see.

NEW ACCESSORIES SHOP OPENS.

Zung Zing Tuck, the Proprietor, Is
One of the First Two Chinese to Take Up Motor Car Work in Shanghai.



Business-like front and entrance to the Automotive Supplies Company, at Thibet Road and Avenue Edward VII, which might be taken as being either in Europe or the United States.

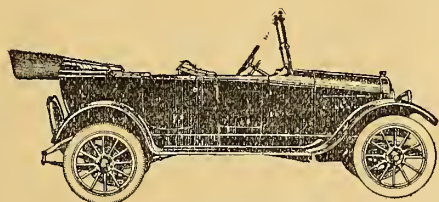
A new shop dealing in the latest in automobile accessories was added to the circle of dealers in Shanghai with the opening of the Automotive Supplies Company on February 1 at 602-603 Thibet Road, at the corner of Avenue Edward VII. The proprietor of the new venture is Zung Zing Tuck, a native of the city.

Zung Zing Tuck was one of the first two Chinese in Shanghai, and this probably means in the whole of China, excluding possibly Hongkong, to take up motor car work. When the Old Motor House was first opened on Medhurst Road, he became one of the members of its staff of employees and has been in the motor car business continuously since that time.

The new company will handle a complete line of motor car equipment and accessories, including Goodyear Tires, Hel-fi spark plugs, Moto Meters, Klaxons, lamps, chain jacks and other similar products. All of the accessories are kept in stock and orders have been placed which will keep the lines constantly up-to-date.

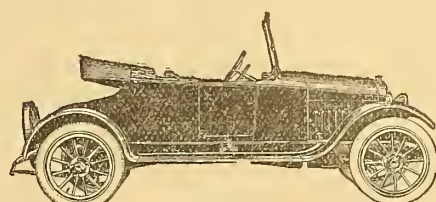


Interior View of Sales Room.



5 Pass. Touring

Maxwell
Tls. 1,000 Tls.



2 Pass. Runabout

EITHER MODEL

Complete with Electric Starting and Lighting

ROOMINESS, plenty of leg room, excellent upholstery—these are the pleasing features of the seating arrangements of the 5-passenger touring car.

THE smart roadster—its body refinements up to date in all respects—has the new and popular "Chummy" seating arrangement.

DONG CHONG BICYCLE Co.

P. 346 NANKING ROAD

SHANGHAI

PHONE C. 1518

WILLYS-OVERLAND INVADES ENGLAND.

Merger Made with Crossley Interests to Manufacture American Car at Manchester.

The first introduction of mass production, that system which has enabled the motor car manufacturers of the United States to outstrip their rivals of the other nations, and the first Anglo-American company to embark on such a program has been made possible by the merger of the Willys-Overland Corporation with the Crossley interests of England. The plant will not only operate for British demand but will also enter into the field of Europe with an added advantage of its close proximity in the matter of deliveries.

With its arrangement with the Crossley Motors, Ltd., the Willys-Overland has obtained what is heralded as the only British war plant designed with an eye to permanence and future peace time employment. It is ideally adapted for American automobile production methods. The plant is located at Manchester, a center of manufacturing which has advertised its own facilities for the purpose of drawing British branch factories of American industries.

An official of the Willys-Overland recently declared that it is absolutely necessary for the American manufacturer who wants to reap the richest rewards from his foreign business in the British colonies as well as in England, to manufacture in Great Britain. British manufacturers, he said, are going to be forced to enter the field of mass production and apparently all they need now is experienced American engineering and methods.

The new Overland 4, which represents the culmination of the experience of the Willys-Overland in volume production, is the car that is to be produced in quantities in the English factory.

VARNISHES

FOR BEST

WFC

RESULTS

VARNISH
& PAINT

COLOUR
MANUFACTURERS

WILKINSON, HEYWOOD & CLARK Limited

LONDON.

Oxy-Acetylene Welding SERVICE Why?

Because

1. Insures against long Shutdowns.
2. Saves the Pieces, Welds all Metals any size, shape or weight.
3. Prevents buying of New Parts.
4. Oxy-Acetylene is indispensable to the Metal Industry.
5. A Good Oxy-Acetylene Welder is an asset to a community.
6. When a breakdown puts your Machinery out of commission, no other method of repair is as efficient.

Write or Phone to

CHINA OXY-ACETYLENE WELDING WORKS SHANGHAI

Office Phone C. 1982.

1 Yuen Ming Yuen Rd.

SHANGHAI'S NEWEST GARAGE HIRE SERVICE ONLY ALL NEW HUPPS

*Catering to that Class of Trade that
Desires the Best.*

GREAT NORTHERN GARAGE Co.

SHANGHAI.

14, Astor Road

'Phone: N. 1463.

NETHERLANDS GUTTA-PERCHA CO.

SINGAPORE RUBBER WORKS

SINGAPORE—SOURABAYA—BATAVIA—CALCUTTA—SHANGHAI.

**Vulcanizing Compound and Canvas
Radiator Hose
Rubber Matting
Motor Pump Tubing
Solid Tires**

Large stocks at our Shanghai Offices and Stores
17 MUSEUM ROAD, SHANGHAI.

Auto Prices Predicted Higher.

(Continued from page 28.)

If the rest of the world can but be brought to absorb, not one car to every six, or fourteen, or twenty, but one to every fifty, there will be indicated a market for 31,300,000 vehicles. Add to this the 9,500,000 mentioned above, and there is a possible market for 40,800,000 vehicles. But, of course, you do not expect to sell cars in quantity to the black savages of Africa, the coolies of China or the pariahs of India, is the natural question. Certainly not, but this is certain.

"The war put transportation on an equality with the other three essentials of life,—food, fuel and raw material. The motor truck and the passenger car have taken their fixed places in transportation, and when there comes about the development of the great continents I have named, someone must buy cars and trucks, whether it be the natives of these countries, their governments, or the citizens or governments of the countries that will do the exploiting. Nor have I taken into account the assured volume of business replacing cars which yearly become obsolete.

"I make a suggestion to you. If you are fortunate enough to have had a son born in 1920, order his car now, so that he may take delivery of it by the time he comes of age in 1941.

"Consider how in every one of the great essential acts of the drama of life, from cradle to grave, the automobile plays its dominating part.

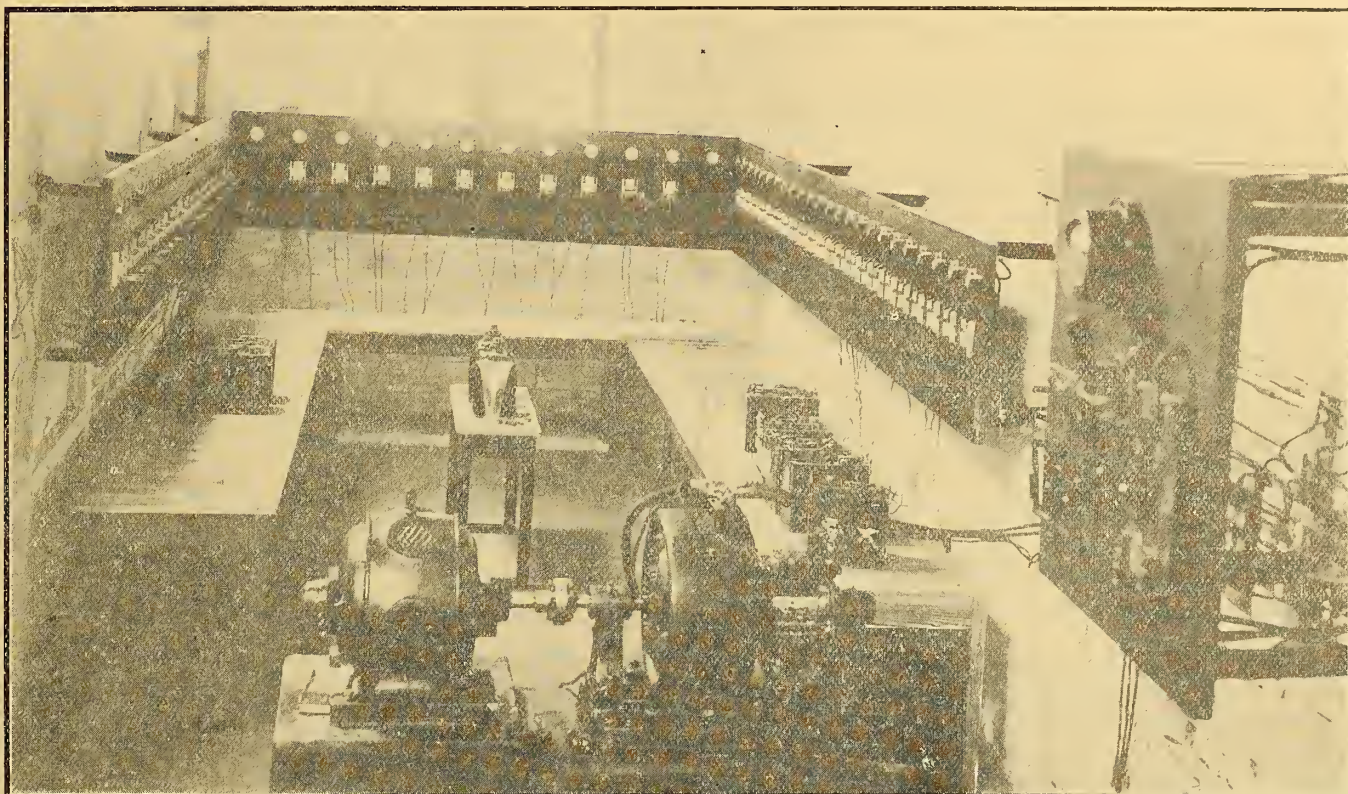
"The stork, accompanied by the doctor, makes its trip to the expectant household in an automobile. The bridegroom on his way to commit the supreme sacrifice has his liberty further shortened by the speed of the car that takes him to the altar. Along with the telephone, the automobile is a first aid to romance. It figures in the work and pleasure of the business man, and when the sable curtain has fallen on the last act of all, the trip to the cemetery and back is made in an automobile, preferably of the fastest type, so that the friends and relatives of the dear departed may the sooner begin the quarrel over his estate.

"The American manufacturers made for the Allies 53,173 trucks and for the United States 126,953 trucks and 18,594 passenger cars.

"The American manufacturers seem to be looking for a wonderful future in China. Java and the Philippine Islands have proved to be an enormous source of demand and while they have become filled up, more or less, in the last year the eyes of the automobile world are looking towards China to build roads and naturally as soon as this starts the automobile must follow. Within the next 60 days we shall have the 1920 models of Buick and Cadillac and the 1920 model of Cheverolet is here now. Again I say, now is the time to buy—spring is coming, the prices are ripe but with the tendency to increase and increase materially."

GIVING BATTERIES INDIVIDUAL SERVICE.

China Garage Company Installs Charging Plant of Latest Type.



The Latest in Battery Charging Rooms Installed at The China Garage Company.

The first individual service battery charging plant department in the Far East has been installed by the China Garage Company, Foochow Road, Shanghai. The department is modeled along the lines of the most modern principles in battery charging and care with added features which are the work of Chas. A. King and P. H. Neibourg of the company.

The inauguration of the department comes as the result of months of experimenting in order to determine just what methods and equipment could be best used to obtain the needed results.

The department as it is now established consists of three charging tables having a capacity of fifty-three batteries fed from a rotary converter. The equipment is the best obtainable for the work and the service offered is one of exceptional value to the motorists of Shanghai and China. An added advantage to the motor car owner is the battery rental service operated in connecting with the charging department. By this service, the owner is able to have a battery which is the property of the garage company installed in his machine during the time his own battery is being

repaired and recharged at a very low cost enabling him to keep his car in constant operation.

When the battery is brought into the charging room it is tested for its strength and examined for fitness. After this it is placed on the charging tables and the process begins.

The advantage of the individual charging is obvious to anyone familiar with the old group charging method. In the latter it is impossible to know whether or not each battery is receiving its proper load for efficient service since two to five batteries of a varying strength may be taking the charging at the same time. Under the individual system each battery receives its needs and is not slighted by being linked up with others.

The charging department is open to inspection for motor car owners who are interested in battery methods and better service for their own machines.

Motor cars and airplanes will soon have a most dominant position in the life of China. Familiarize yourself with the steps that are bringing them to the forefront by reading closely every issue of "The Oriental Motor." And when you have finished pass it on to one of your friends.

MOTOR CAR INSURANCE

IS YOUR CAR INSURED?

OUR POLICY COVERS EVERYTHING THAT
CAN POSSIBLY HAPPEN TO A CAR

ALSO

COVERS LIABILITY TO THE THIRD PARTY

BEFORE INSURING YOUR CAR GET OUR RATES

PROMPT SETTLEMENT OF ALL CLAIMS

ASSURANCE FRANCO ASIATIQUE

7, Avenue Edward VII. Shanghai

J. BEUDIN & M. SPEELMAN,
General Managers.

Agencies :

TIENTSIN, 45, Rue de France.

HANKOW, Anderson, Meyer & Co.

PEKING, Regine's Building.

HONGKONG, Gérin, Drevard & Co.

BANGKOK, E. C. Monod & Co.

WINDSOR GLASSES

The Vogue in
Eyewear

Let us show how
becoming to you
WINDSORS are.

We supply all kinds of
spectacles :

Motor Goggles,

Sun Glasses,

Crookes,

Torics,

Luxfels,

Kryptoks ground according to prescription.

Branches :

PEKING, TIENTSIN, HANKOW, CANTON,

HONGKONG, CHANGSHA, NANCHANG.

CHINESE OPTICAL COMPANY

Head Office :—P352 Nanking Road, Shanghai.

Telephone C. 3895.

司 公 鏡 眼 益 精 國 中

Your friends will have the same interest in reading "The Oriental Motor" as you have. When you have finished with this copy hand it to some one else interested in motors and motoring. You will be doing both them and us a kindness.

MOTOR BUSSES FOR PASSENGER SERVICE.

Gasoline Carriers are Replacing Electric Cars in Crowded Traffic Ways.

The motor bus, the outgrowth of the American "jitney" with the adoption of certain principles of the English omnibus, is growing in importance as a public carrier. Its services are inter-as well as intra-urban. The irresponsibility and lack of business methods of the pioneer "jitney" operators has given way to the carefully and efficiently conducted operation of the motor bus of today. The latter is as different from the "jitney" of ten years ago as the railroad of today is from the railroad of fifty years ago. No longer is there ignorant rate cutting, inferior equipment and reckless operation. These features in recent times have been in a large measure completely reversed.

Every new transportation agency sooner or later meets antagonism from the older transportation agencies. When the subway was first proposed it was argued that it would so materially decrease the number of passengers using existing public carriers as to make their operation unprofitable. This argument has long since been disproved. Now the same argument has been advanced against the motor bus. Motor bus lines are not direct competitors of a city's public carriers. Motor bus lines operate over routes that have no other kind of public transportation and at rates which, until recently, were double that of a city's ordinary public carriers. The motor bus differs in so many respects from the elevated train, the subway and the surface car that with its advantages, it has come to stay.

What type of carrier could secure a franchise to operate on such thoroughfares as Fifth Avenue, Riverside Drive, Seventh Avenue or Fifty Seventh Street, New York City or Szechuen, Kiangse or Honan Roads of Shanghai? Certainly not an electric surface car, for it would mean laying tracks, a nuisance that would not be tolerated. The motor bus permits hundreds of thousands of persons to utilize these streets both for business and pleasure where formerly they could not, except possibly at considerable inconvenience or cost. The New York thoroughfares which only a few years ago were used almost exclusively by those who could afford a private or hired conveyance, are now, through the medium of the motor bus, conveniently and inexpensively available to everyone in the city. The motor bus functions as efficiently as the surface car, at the same time eliminating the necessity of tracks and noise attendant to surface car operation.

When a car or train develops a mechanical difficulty which prevents its further progress, all the succeeding cars or trains are delayed until the disabled car is repaired or removed. Not so with the motor bus—a break-down only ties up the one bus. Succeeding buses merely pass around the disabled bus and the schedule suffers but little.

Surface cars, elevated trains and subway trains are immobile. When tracks, upon which these carriers run, are laid they become permanent fixtures. Laying tracks

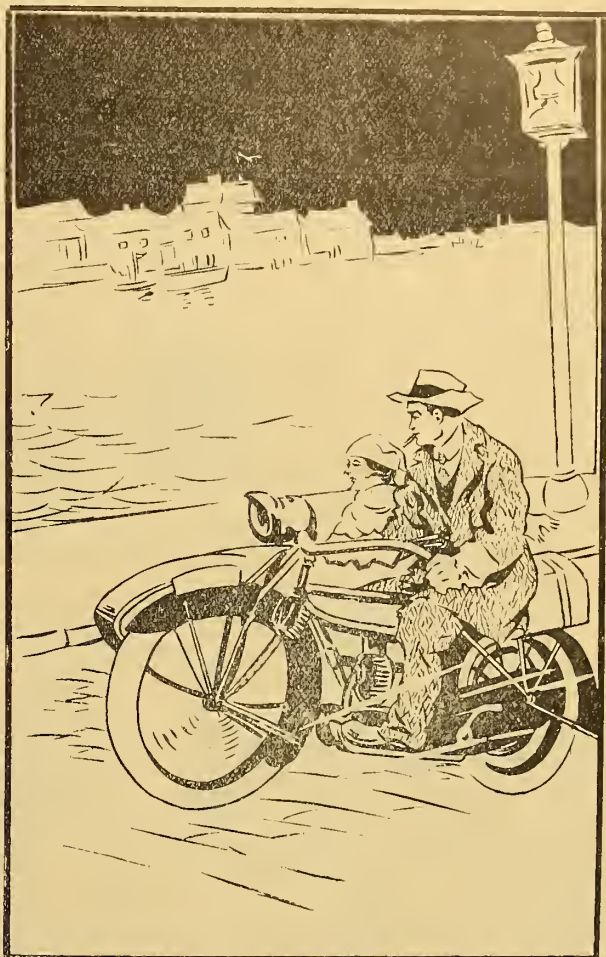
"Dear, What a jolly little place this Bund is! Where do you want to stop?"

"The first place where you can get a box of the BEAUTY CIGARETTES, Darling. I am just out and can't go any further without a BEAUTY CIGARETTE any more than the Motor-cycle can go without gasoline."

Agents :

SINCERE Co., WING ON Co.,
M. Y. SAN & Co.,
AND ALL LEADING TOBACCONISTS.

NANYANG BROS. TOBACCO Co.
 12, NANKING ROAD, SHANGHAI.



is not only expensive but keeps thoroughfares in an impassable condition for some time. The track once laid cannot be shifted to meet changing conditions. Lines that are unprofitable through lack of patronage must, if they are discontinued, either leave their tracks, considering them a total loss or must go to the expense of taking them up and restoring the thoroughfare to its former condition. The motor bus is mobile. If something should occur which shuts traffic off from one or more blocks of its customary itinerary, the motor bus does not suffer from the blockade, it merely changes its normal course. If after a bus route is put into operation, the operators find the line unprofitable, they can select another route, transfer their equipment and begin operation within a very short time. No essential and expensive equipment is lost and persons living on the abandoned or new route are not inconvenienced by disfigured or impassable streets.

Shanghai has recognized this by a semi-motor type of tram car operating with a trolley and having a steering gear and rubber tired wheels.

As a community develops, its transportation needs develop. The common electric carriers of our modern cities either under or over-develop their service. Over-development results in a greater outlay of capital than is essential. Service which is maintained beyond the areas of need is not self-sustaining and forces the service in the densely populated areas to carry the losses. The passengers of the profitable

part of the line therefore do not receive the best service that their fare might purchase. The motor bus, on the other hand, can extend its route just as slowly or as quickly as requirements demand, thus giving its passengers a full return for their fare. Cities may become overcrowded and while there is territory for expansion, this expansion either does not occur or is very slow. Such conditions may be caused by inefficient or too distant transportation. A person prefers to live within a comparatively short distance from a transportation agency that will take him to his work without delay and in comfort. Where traction officials have been short-sighted, city expansion has been retarded. The motor bus unit is so cheap in comparison to other transportation units, that it can be sent into territory for development purposes, at a fraction of the cost of traction units. With the present congested conditions in cities, this is an important consideration.

The motor bus, being smaller in size and lighter per passenger in weight than the common electric carriers, is the logical transportation agency in crowded or narrow streets. In such streets, surface cars running down the center crowd traffic causing congestion and accidents. Motor buses run as does ordinary traffic, thus minimizing traffic congestion. When the storage battery cars which were run through the crowded East Side of New York City were taken off by the New York City carlines receiver, Mayor Hylan immediately substituted motor busses.

SHANGHAI MOTORCYCLE CLUB FORMED.

New Body Will Promote Protective Measures for Drivers and Racing Meets.



The President, Other Officers, and Some Members of the Committees of the Motorcycle Club of Shanghai.

Another addition was made recently to motordom in Shanghai by the formation of the Motorcycle Club of Shanghai. The organization came as the result of an increasing motorcycle population and an existing need for a body to bring together all of the owners and drivers for mutual protection and encouragement.

The first announced plan of the club is that of a series of races, the first of which it hopes to hold about the end of the month of April. Arrangements are now being made for the use of the Kiangwan race course of the International Recreation Club and China may soon have its first motorcycle speed events of that track.

The officers of the new club are: W. S. Harvie, president; Max Friedman, vice-president; Kenneth Staley, secretary; Robert J. Gill, treasurer. A general executive committee of the following members was appointed: A. M. Scott Morris, R. W. Squires, L. Bertes, J. Langridge and Gordon Nazer. A special committee is also serving to arrange for the racing meets. At the first meeting a constitution and by-laws were adopted and the club is now in readiness to begin its work.

One of the most distinctive features proposed by the club for its members is a plan of accident, legal and medical

protection. By this plan all members of the club who desire the same will be given accident insurance, the advice of attorneys in any legal controversy connected with their motorcycling activities, and the attention of a physician in the event of an accident. This will be optional, however, and the fee will not be included in the \$5 initiation fee and the yearly dues of \$5. An additional fee will be required to pay for this service. The plan will be open only to members of the club.

Another program which the club expects to map out is that of motorcycle touring. Realizing that the wheelbarrow roads and paths through China are passable to only one motor driven machine, the motorcycle, the club plans to blaze trails out of Shanghai through the country, mapping out routes and making arrangements so that the members may make week-end tours, or tours of longer duration. This will be the first time this has ever been attempted and the officers of the organization expect the work to be a great impetus to the increase of the owners of motorcycles. The work will be in the hands of a special committee and will be started soon.

As noted in the first plans of the club, every effort will be made to encourage the sporting side of motorcycling,

THE MILITARY EXCELSIOR MODEL 19

THE MOTORCYCLE THAT HAS
ALWAYS MADE GOOD
NOW MADE BETTER THAN EVER

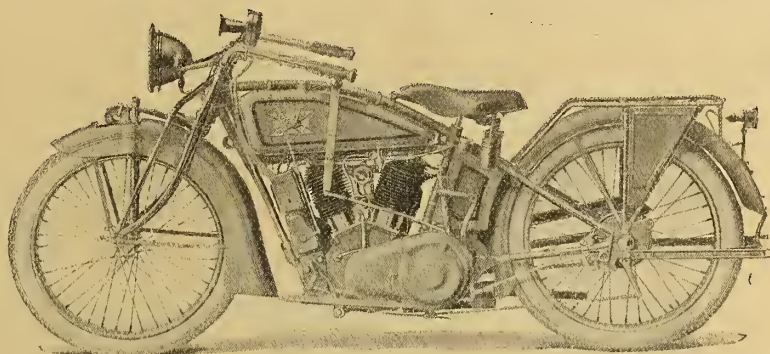


Illustration shows Model 19-E with MIDCO Electric System, including Magneto Generator, Electric Head and Rear Lamps and Electric Horn.

AMERICAN TRADING COMPANY

PEKING TIENTSIN

SHANGHAI

HANKOW HARBIN

Exclusive Distributors for China.

according to the officers, and the series of race meets is expected to accomplish this. The racing talent will have to be by necessity confined to Shanghai in the beginning, but it is hoped that sufficient interest will be taken in the sport to make it possible to have one or two large meetings each year in which cyclists from all parts of China and the Far East will participate.

Max Friedman, vice-president of the club, has had a number of years experience in managing and directing motorcycle race meets in the United States and will give the benefit of this to the Shanghai organization.

The motorcycle is the lightest machine in motordom, possessing such an enormous amount of power and its speed is such that racing with the machine is both spectacular and thrilling.

**The Motorcycle Section
Containing Local and Foreign
Notes is a Permanent Feature
of The Oriental Motor.**

A CAR BUILT FOR \$22.50 GOLD.

American Engineer Achieves Record Low Cost of
Production with "Pick-ups."

Twenty-two dollars and a half gold is the cost of a motor car which Fred Wright, a motive engineer of Buffalo, U. S. A., claims to be the cheapest automobile ever built. The cost includes only the purchase of the parts, the construction work being done by Mr. Wright.

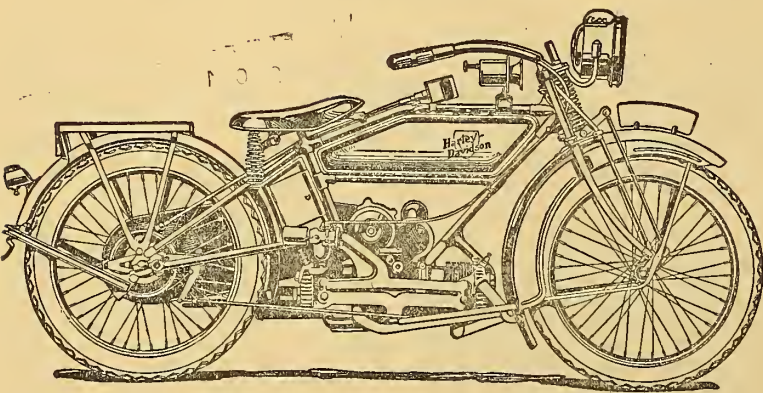
Buying damaged and discarded parts from junk shops, the chassis was completed at \$22.50. The body is now being shaped up and the constructor places the entire total at considerably less than \$50.

The largest item of expense was \$5 paid for a set of discarded tires and inner tubes. The broken and damaged parts were repaired by Mr. Wright, who has for twenty years been engaged in marine, automobile and aviation engine engineering, and is at present a superintendent in the employ of the Curtiss Airplane and Motors Corporation.

In its tryout the machine, which in the words of its builder is "mostly Ford," attained a speed of 48 miles an hour.

Harley Davidson

Sport Model



Equipped with the new 6 horsepower opposed twin Power Plant, Super-Heated Manifold and enclosed single chain drive leaves nothing to be desired.

Shipment due in March
Book your order NOW

SQUIRES-BINGHAM Co.

Exclusive Agents

17 NANKING ROAD SHANGHAI

AUTOISTS—LOOK!

MOTORLIFE

**SAVES 25% to 50%
GASOLINE**

Use 1 oz. "MOTORLIFE" to 5 gallon Gasolene
Also removes and prevents Carbon

INSURES MOTOR EFFICIENCY

Price **\$2.00** Gold per 32 oz. Tin.

MADE BY
MOTORLIFE MANUFACTURING Co., Memphis, Tenn.

SOLE AGENTS FOR CHINA

THE CHINESE TRADING CO.

10 Ningpo Road, Shanghai.

GASOLINE DEMAND EXCEEDS PRODUCTION.

**Estimated Increase of 17,000,000 Barrels Required to
Cover Big Increase of Cars.**

Evidence of a possible shortage of gasoline unless refineries throughout the United States greatly increase their production in 1920, is seen in figures which have been gathered by sources in close touch with the industry. Refineries, it is revealed, manufactured an estimated 92,700,000 barrels of gasoline in 1919, an increase of 7,700,000 barrels, or nine per cent, over 1918. On the other hand, the number of motor cars registered at the end of 1919 is estimated at 7,500,000, a gain of 22 per cent over 1918. This includes only passenger and commercial cars, and not tractors, motor boats and gas engines.

Statistics reveal an estimated increase of 17,000,000 barrels of gasoline needed for the record number of motor vehicles and gas engines which are to be produced in 1920. Automobile manufacturers are preparing, it is said, to put 2,675,000 cars, including 425,000 commercial cars, on the market this year and allowing for 20 per cent replacements this would make the number in use in 1920 about 8,675,000. When there is taken into consideration the estimate that the average car consumes about 500 gallons or 12.3 barrels of gasoline a year, it is evident that during 1920 at least 100,000,000 barrels of gasoline must be produced for domestic consumption alone. Then adding to this 10,000,000 barrels which will be needed for exports, tractor and other uses and a total of 110,000,000 barrels will be needed. Stocks of gasoline on hand September 30, 1919 amounted to 8,800,000 barrels, a gain of 2,400,000 barrels over those as of December 31, 1918.

It is indicated that lubricating oil production will be in proportionately increased demand. Last year, 19,685,667 barrels were manufactured and about 12,369,414 consumed in the United States. In 1918 output was 20,000,000 barrels, with a consumption of 19,748,331 barrels. Exports were proportionately higher, being about 6,677,000 barrels last year.

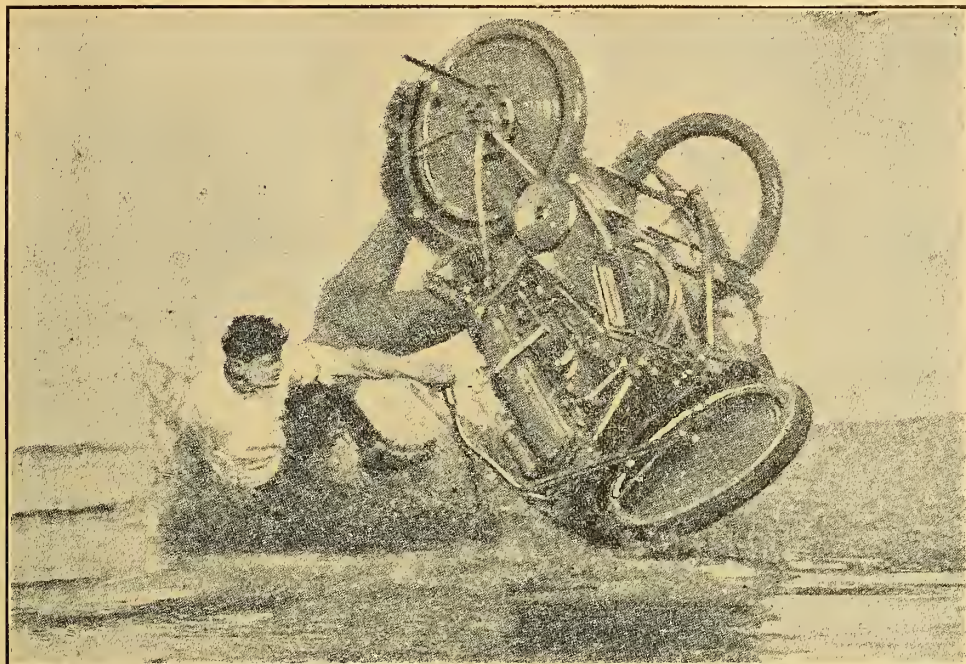
PETROLEUM AND CARS.

Fuel and Lubricant Measured in Barrels.

Year.	Gasoline Manufactured.	Lubricating Oil Manufactured.	Motor Cars Registered.
1919	*92,700,735	*19,685,667	*7,500,000
1918	85,000,000	20,000,000	6,146,000
1917	67,870,153	17,134,400	4,950,000
1916	49,020,966	14,870,028	3,400,000
1915	36,876,160	.....	2,400,000
1914	34,762,790	.....	1,700,000

*Estimated

AN UNUSUAL SNAP OF A MOTORCYCLE SPILL.



This machine, while dashing along a sandy beach hit a hole, leaped into the air, turned over and dropped: the driver fell clear of the machine, but the unfortunate passenger in the side car played an ostrich trick in the sand. Neither were injured. This illustrates the point that a motorcycle with its light weight and enormous power may be thrown off its path by the slightest mishap.

FIRESTONE TO COME TO THE EAST.

Singapore will be Home of Rubber Handling Plant of
American Tire Manufacturers.

A new rubber handling plant in which the Firestone Tire and Rubber Company expects to introduce vast economies into its preparation and refining processes will be constructed soon in Singapore, according to a recent announcement from the United States. The project has been in the process of formation for some time but has only received the confirming action from the directors of the corporation recently.

By the construction and operation of this Far Eastern plant the company points out that the rubber can be brought direct from it to the United States in a condition such as to be ready for immediate use by the skilled hands.

A sales goal of \$150,000,000 for the fiscal year ending October 30, 1920, has been set by the directors of the firm and other expansion plans made and approved. The new vice presidents have been elected, A. G. Partridge, in charge of sales, J. W. Thomas, in charge of manufacturing, and Thomas Clements, in charge of offices and purchases. All are men of long experience and service with the company.

If it is in the motor line you will find who the Shanghai dealer is by turning to the Buyers' Reference Guide of "The Oriental Motor" each month. It is there for your convenience and should be used.

WONG AH ZAI

EXPERT

REPAIRING and OVERHAULING
OF ALL MAKES

MOTOR CARS, MOTOR CYCLES

AND

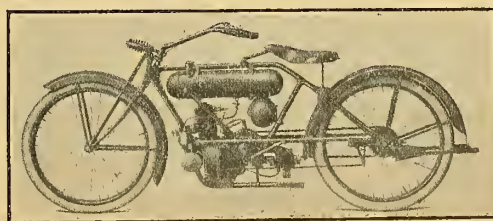
GASOLENE ENGINES

SHANGHAI.

P.512 N. HONAN ROAD

Phone N. 465

CLEVELAND LIGHT WEIGHT



Tls.
180

2½ H. P. 2-Stroke Motor—Kick Starter
Straight line Worm Drive—Weight 160 lbs.

75 Miles to THE GALLON

The ideal Machine for Shanghai and Outports

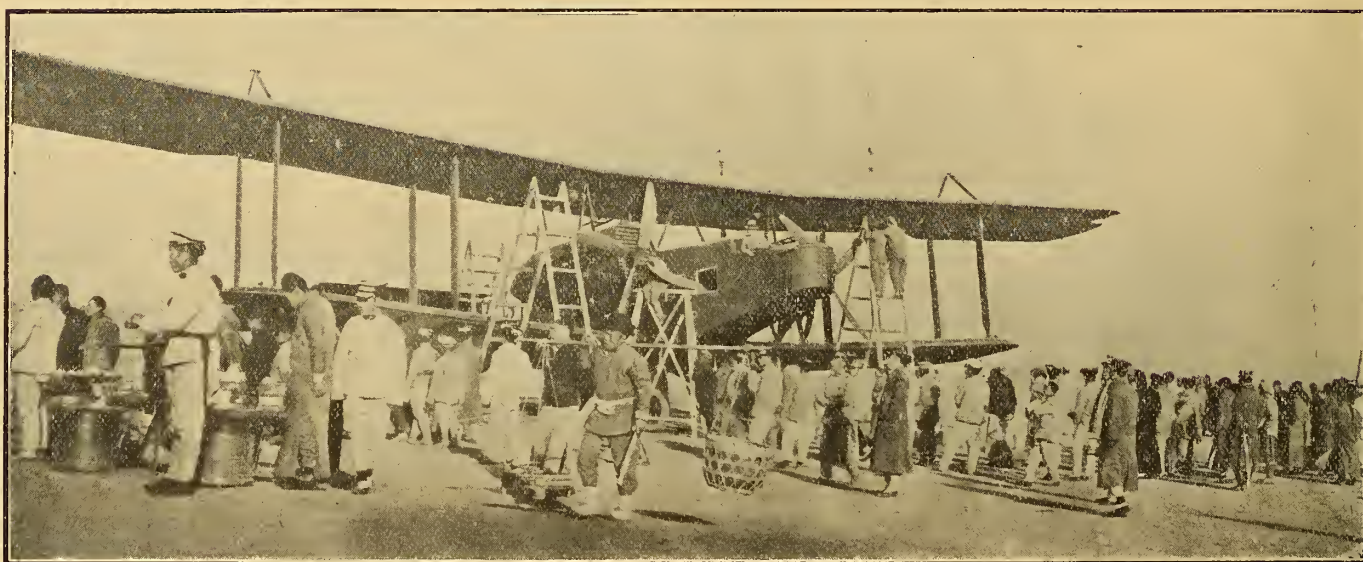
DONG CHONG BICYCLE Co.

P.346 Nanking Road, Shanghai.

FIRST CHINESE GOVERNMENT AIRPLANES.

A Pictorial Story of The Republic's New Handley-Pages.

CHINESE ASSEMBLING NEW HANDLEY-PAGE.



Much interest is evinced by the entire population of China, particularly of Peking, in the new sky carts of the Republic, as is illustrated above.

THE AIRPLANE IN NEW TERRITORY.

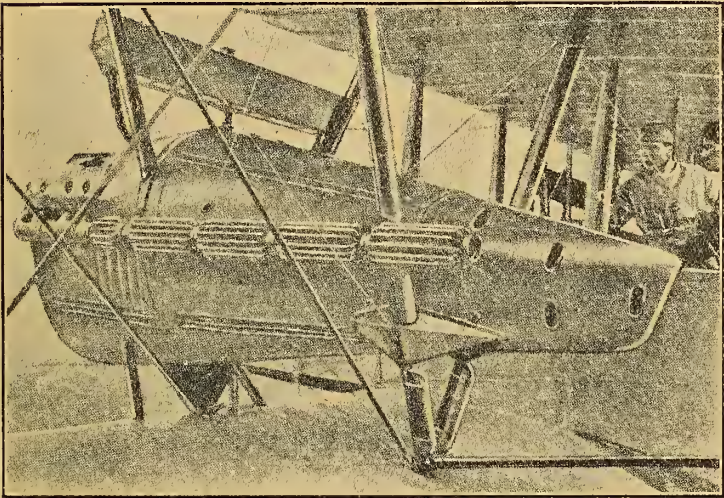


View from the side showing the passenger saloon accomodating twelve persons. The pilot and engineer are seated forward of the saloon.

The type of Airplane that is being supplied by the Handley-Page Company to the Republic of China has been specially designed for Passenger and cargo carrying. Under instructions from the Chinese Government the fuselage is divided into two parts, with seating accomodations for twelve Passengers and the balance carrying cargo, the total weight amounting to 4,000 Pounds. The guaranteed maximum altitude for the machine is 10,000 feet. The gasoline Consumption is forty to fifty gallons an hour fully loaded. The span is 100 feet from wing tip to wing tip but when the wings are folded for housing it is reduced to thirty-one feet. The engine equipment consists of two 300 h. p. Rolls-Royce Eagles of the 12 cylinder type. The touring speed is 85 to 95 miles an hour.

FRENCH ADOPT MUFFLER FOR ARMY AIRPLANES.

War Taught Necessity of Lessening Exhaust Noises.



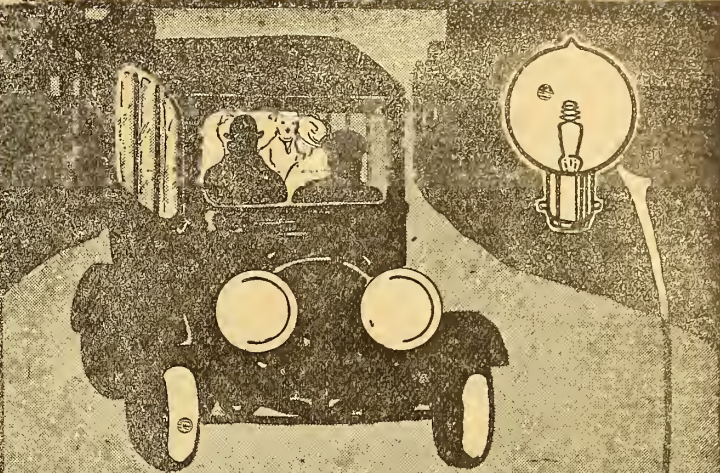
The Muffler adjusted—Note use of radial plates.

Like all healthy youngsters, the airplane is a noisy affair. Propeller and engine unite to produce a roar that always makes conversation difficult, and, in time of war, supplies to a keen-eared enemy a sure warning of impending danger. Designers are seeking to mitigate the evil, and so far, though unable to deaden the “whirr” of the propeller, have produced numerous featherweight mufflers to silence the engine exhaust. The attachment has passed the experimental stage, as the French army has adopted a standard mechanism for war airplanes.

U. S. MAKERS PREFER SIX-CYLINDER MODELS.

The following percentage table indicates the increasing prestige of the six cylinder type among American manufacturers

Year.	Sixes	All other types.
1910	10	90
1911	10	83
1912	19	81
1913	36	64
1914	45	55
1915	47.5	52.5
1916	45.8	54.2
1917	47	53
1918	51.7	48.3
1919	53.2	46.8
1920	55.8	44.2



THE LIGHT
THAT NEUER FAILS
“TECON”
Motor Lamps

For every make of car
are obtainable from the
Brilliant Electric Company.


Consulting engineer and electrical contractors
P564 Nanking Road, Shanghai.
Phone Central 4907

A-97

GASTINE

The Gasolene “Economizer”

Positively prevents Carbon formation. The prime cure for motor troubles. Used on all types of gasolene and kerosene engines. It actually increases power, speed and mileage 25 to 40%.



GASTINE is a gasolene purifier in tablet form. It not only reduces fuel bills more than 25% but it assures easier hill climbing, better sparking, faster ignition and prevents back-firing. GASTINE is guaranteed non-injurious and is sold with “MONEY BACK” guarantee. No motorist can afford to be without it. Sample box of 100 tablets sent prepaid for **One Dollar** GASTINE is endorsed and recommended by the National Ford Owners Club (Inc.). New York City, under Certificate No. 878.

Trade Mark
Reg. U. S. Pat. Off.

THE GASTINE Co., Bridgeton, N. J., U. S. A.

THE CONTINENTAL IMP. & EXP. CO.
Exclusive Agents for China.
15 MUSEUM ROAD SHANGHAI Phone C. 3088

Glycerin of the best quality, applied to the leather facing of cone clutches, give the “take hold” which is often lacking. If the clutch is fierce in taking hold, add a little graphite to the glycerin.

INDEX TO ADVERTISERS

	PAGE
Alliance Assurance Co., Ltd.	34
American Trading Co.	53
Andersen, Meyer & Co., Ltd.	35
Assurance Franco-Asiatique	50
Auto Castle	39
Auto Palace Co.	37
Automotive Supplies Co.	43
Brilliant Electric Co.	57
Bringewatt, O. E.	29
Burr Photo Co.	58
Central Garage Co.	2nd Cover, 2
China Garage Co.	17, 41
China Oxy-Acetylene Welding Works	48
Chinese Optical Co.	50
Chinese Trading Co.	54
Commercial Transportation Co.	42
Commercial Union Assurance Co., Ltd.	40
Continental Imp. & Exp. Co.	57
Dodge & Seymour (China) Ltd.	27
Dong Chong Bicycle Co.	40, 47, 55
Dunlop Rubber Co., Ltd.	4
Eastern Garage	33
Excess Insurance Co., Ltd.	4th Cover
Feilung Garage Co.	45
Furukawa & Co., Ltd.	25
Gaston, Williams & Wigmore, (F.E.D.) Inc.	21
General Ac. F. & L. As. Corp., Ltd.	44
Goodrich Co., B. F.	25
Goodyear Tire & Rubber Co.	21
Great Northern Garage Co.	48
Honigsberg & Co., Inc., H. S.,	23
Hudford Garage Co.	27
Jardine, Matheson & Co., Ltd.	34
Koster Company	3rd Cover
Mencarini & Co.	1
Morimura Garage Co.	38
Mustard & Co.	3rd Cover
Nanyang Bros. Tobacco Co.	51
Netherlands Gutta-Percha Co.	48
New York Lubricating Oil Co.	3rd Cover
North Br. & Mercantile Ins. Co., Ltd.	38
Sassoon & Co., E. D.	38
Shanghai Automobile Co.	45
Shanghai Garage Co., Ltd.	33
Shanghai Horse Bazaar & Motor Co., Ltd.	44
Sparke, C. E., Insurance	4th Cover
Squires-Bingham Co.	1, 54
Star Garage	33
Union Insurance Society of Canton, Ltd.	19
Vacuum Oil Company	4th Cover
Wah Chang Trading Corp	36
Wheelock & Co.	44
Wichita Motor Truck Co.	29
Wilkinson, Heywood & Clark, Ltd.	47
Wong Ah Zai Repair Shops	55

BURR PHOTO Co.
COMMERCIAL
PHOTOGRAPHY
AND
PORTRAITURE

KODAKS—FILMS
DEVELOPING & PRINTING

FILMS DEVELOPED
FREE OF CHARGE

PHOTO SUPPLIES AND PICTURE FRAMING.

STUDIO

2 BROADWAY. 'Phone N. 2392.
SHANGHAI.

PHOTOGRAPHERS TO
THE ORIENTAL MOTOR

American exports of automobiles have increased to the point where during the past year one automobile was exported from the United States on an average of every nine minutes, night and day.

THE SUNDAY ORGAN
FOR
ENGLISH-SPEAKING PEOPLE IN SHANGHAI
IS
"LLOYD'S WEEKLY."
ONLY SIX DOLLARS A YEAR.

A consignment of costumes from Paris for his new production "Maggie" at the Oxford Theatre, London, having been held up several days at Boulogne, Mr. C. B. Cochran determined to go over by air and fetch them. He left Hounslow in an Airco biplane, flew to Boulogne in 40 minutes, collected the costumes, and returned to London by air.

"RED SPOT"
DOUBLE-DUTY SEARCHLIGHT
Red for danger White for light
For Sale by
DONG CHONG BICYCLE Co.
P 346 Nanking Road, Shanghai.

GOODRICH TIRES
"Best in the Long Run"
Furukawa & Co., Ltd.
Shanghai, Peking, Tientsin.

FRANCE EXPECTS TO MAKE
200,000 CARS IN 1920.

The French cousin to the U. S. National Automobile Chamber of Commerce recently announced with a thrill of pride that its production of motor cars for the year 1920 would be 200,000. This is about 20 per cent. of the number of cars America will be short, according to reliable forecasts.

AUTOMOBILE SUPPLIES
Complete line in Stock from Spark Plugs to Tires.
Also Lubricating Oil and Gasoline.
DONG CHONG BICYCLE Co.
P 346 Nanking Road, Shanghai.
Klaxon and Samson Horns in Stock.

GOOD YEAR
TIRES
FEI LUNG GARAGE Co.
H. 153 Hupeh Road, Shanghai.

HEARD AT THE SHOW

"Can you get me a discount on one of these?" whispered a friend from the old town to his boyhood pal who had risen in the sales ranks of a company well known to the industry. The scene, of course, was at the Grand Central Palace last January.

"Discount; say, I can't even get you delivery on one," answered the latter, up to his ears in arguments from dealers as to why the factory didn't send down a few freight trains full of cars instead of a suitcase full of plans for the future.

Just say you "Saw it in the
ORIENTAL MOTOR"
when writing advertisers.

OAKLAND
"SENSIBLE SIX"
CHINA GARAGE Co.
21 FOOCHOW ROAD, SHANGHAI.

Firestone
NON-SKID TIRES
CENTRAL GARAGE CO.
2a, Jinkee Road, Shanghai.

WATCH
THE
ORIENTAL
MOTOR
For 1920

The
Oriental Motor
is printed by
The
Shanghai Mercury, Ltd.
5, Hongkong Road,
SHANGHAI.

PILOTLESS BOMBING PLANES

The *Scientific American* is responsible for a statement of Fokker, inventor of the German plane that made a splendid record during the war, that in 1916 German army authorities asked him to make a cheap airplane, capable of flying without pilot for about four hours, to be steered by wireless and carry a huge bomb. It was planned to send these machines aloft in groups, each group controlled by one flying man.

Fokker says that tests conducted proved the practicability of the plan, but the German War Office decided at the last moment to make the machine in government factories. The result was a series of delays and after two years of bungling, a huge order was given to Fokker for the production of these airplanes. He was ready for quantity production when the armistice was signed.

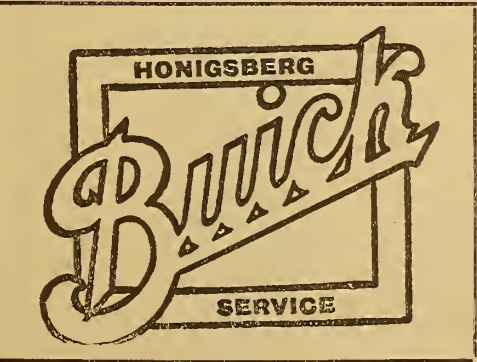
THIS YEAR'S ROADS IN AMERICA.

The greatest impetus ever known in the history of road-making in America is planned for the year 1920. The aggregate is almost \$700,000,000-Gold for road building and road improvement.

HAUL

BY

TRUCK



BUYERS' REFERENCE GUIDE

The names appearing in this Index are not a part of the advertisers' contract, but are published as a matter of convenience for our readers. The publishers assume no responsibility for errors or omissions.

PASSENGER CARS

	SEE PAGE
Allen, Agents for	2
Anderson, "	2
Arrol-Johnston, "	44
Austin, "	2
Berleit, "	44
Briscoe, "	37
Buick, "	23
Cadillac, "	23
Chandler, "	33
Chevrolet, "	23
Cleveland, "	33
Commonwealth, "	45
Cunningham, "	23
Dodge Brothers, "	33
Essex, "	27
Fiat, "	44
Ford, "	27
Haynes, "	39
Hudson, "	27
Hupmobile, "	33
Jordan, "	45
Liberty Six, "	45
Marmon, "	23
Maxwell, "	47
Mercer, "	2
Milburn Electric, "	35
Mitchell, "	45
Moon, "	33
Nash, "	36
Oakland, "	17
Overland, "	1st Cover
Paige, "	58
Premier, "	33
Scripps-Booth, "	44
Standard, "	33
Stearns, "	44
Studebaker, "	44
Stutz, "	23
Templar, "	2
Willys-Knight, "	1st Cover

COMMERCIAL CARS—TRUCKS

Clydesdale, Agents for	33
Dart, "	23
Defiance, "	39
Denby, "	33
Duplex, "	23
Federal, "	2
Garford, "	2
Mack, "	35
Maxwell, "	33
Nash, "	36
Paige, "	58
Republic, "	17
Stewart, "	23
Thornycroft, "	44
Truxton, "	27
Walker Electric, "	35
Wichita, "	29

USED CARS

	SEE PAGE
Auto Castle	39
TIRES	
Dunlop Agents for	4
Firestone "	2
Fisk "	33
Goodrich "	25-38
Goodyear "	21-23-43-45
Howe "	33
Lee "	2
Marathon "	17
Michelin "	37
Miller "	27
North British "	33
R. O. M. "	33
Savage "	44
Singapore Rubber Works	48
United States "	44

AUTOMOTIVE EQUIPMENT

Auto Castle	39
Automotive Supplies Co.	43
Central Garage Co.	2
Dodge & Seymour, Ltd.	27
Dong Chong Bicycle Co.	52
Fei Lung Company	45
Honigsberg & Co.	23-24
Shanghai Garage Co., Ltd.	33
Shanghai Horse Bazaar	44

AUTOMOTIVE SUNDRIES

Brilliant Lamp Co.	57
Chinese Trading Co., Inc.	54
Continental I. & E. Co.	57
Mustard & Co.	3rd Cover
Wilkinson, Heywood & Clark, Ltd. ...	47

ELECTRICAL ENGINEERS

Andersen, Meyer & Co., Ltd.	35
Auto Palace Company	37
China Garage Co.	17-41
Honigsberg & Co., Inc.	23
Shanghai Horse Bazaar	44
Shanghai Garage Co., Ltd.	33

GARAGES

	Phone
Andersen, Meyer & Co., Ltd. C. 778...	35
Auto Castle	C. 402... 39
Auto Palace	W. 465... 37
Central Garage	C. 3809... 2
China Garage Co.	C. 2403... 17
Eastern Garage	C. 1159... 33
Fei Lung Garage	C. 4133... 45
Gt. Northern Garage Co.	N. 1463... 48
Honigsberg Service	W. 1234... 23
Hudford Garage	C. 4257... 27
Morimura Garage Co.	N. 2938... 38
Shanghai Automobile Co.	W. 933... 45
Shanghai Horse Bazaar	W. 1641... 44
Star Garage	W. 197... 33

INSURANCE, MOTOR CAR

	SEE PAGE
Alliance Assurance Co., Ltd.	34
Assurance Franco-Asiatique	50
Commercial Union Assurance Co.	40
Excess Ins. Co., Ltd.	4th Cover
General Ac. F. & L. Assurance Co., Ltd.	44
Jardine, Matheson & Co., Ltd.	34
North Br. & Mercantile Ins. Co., Ltd. ...	38
Sparke, C. E.	4th Cover
Union Ins. Society of Canton, Ltd.	19
Wheelock & Co.	44

OILS AND LUBRICANTS

Koster Company	3rd Cover
Mencarini & Co.	1
New York Lubricating Oil Co.	3rd Cover
Squires-Bingham Co.	1
Vacuum Oil Co.	4th Cover

OPTICAL

Chinese Optical Co.	50
--------------------------	----

REPAIRS AND OVERHAULING

Auto Castle	39
Auto Palace Co.	37
Central Garage Service Station	2
China Garage Co.	17
China Oxy-acetylene Welding Works	48
Fei Lung Company	45
Honigsberg's Service Station	23
Hudford Garage	27
Morimura Garage Co.	38
Shanghai Garage Co., Ltd.	33
Shanghai Horse Bazaar	44
Wong Ah Zai	55

TRUCKING SERVICE

Commercial Transportation Co.	42
C. G. C. Truck Service	17
Central Garage Co.	2

MOTOR CYCLES

B. S. A.	Agents for	55
Cleveland, "		55
Emblem, "		55
Evans Power Cycle, "		55
Excelsior, "		53
Harley-Davidson, "		54
Henderson, "		2
Indian, "		33
Reading-Standard, "		55

MOTOR CYCLE SUPPLIES

Automotive Supplies Co.	43
Central Garage Co.	2
Dong Chong Bicycle Co.	55
Squires-Bingham Co.	54

MOTOR CYCLE REPAIRS

Auto Palace Co.	37
Central Garage Service Station	2
Dong Chong Bicycle Co.	55
Fei Lung Company	45
Morimura Garage Co.	38
Star Garage	33
Wong Ah Zai	55

MONOGRAM HISTORY

FOR nearly twenty years, or since the first automobiles began to find their way onto the market, MONOGRAM OIL has set the gauge of quality for automobile and gas engine lubrication.

The makers of MONOGRAM were the first to give special study to the complex problems that have to be met in gas engine lubrication.

Their early solution of the lubrication problem, as applied to the internal combustion engine, was given to the world as MONOGRAM OIL.

A long record of unvarying quality and a broad field of well satisfied users have made the word "MONOGRAM" stand in relation to oil for exactly what the word "Sterling" means as applied to silver.

The unsolicited and unqualified endorsement of MONOGRAM OIL by 98% of the racing drivers and speed kings of the world and the results shown by Ralph de Palma's latest triumph with super-speed cars lubricated with MONOGRAM, all bear testimony to the fact that MONOGRAM OIL always has been and is now the preferred oil where genuine and dependable lubrication is wanted.

USE MONOGRAM OIL IN THE FIRST PLACE AND BE ON THE SAFE SIDE.

What the owner of an automobile or motor truck must consider is not HOW MUCH HIS LUBRICATING OIL COSTS HIM, but HOW MUCH IT SAVES HIM in wear and tear and repair charges.

If you put an oil in your car and it fails JUST ONCE, the expense of making good the damage cannot be made up in two years, and possibly longer, by the most rigid economy in buying Oil.

MADE BY

New York Lubricating Oil Co.,
Now Obtainable at all Garages.

THE KOSTER COMPANY

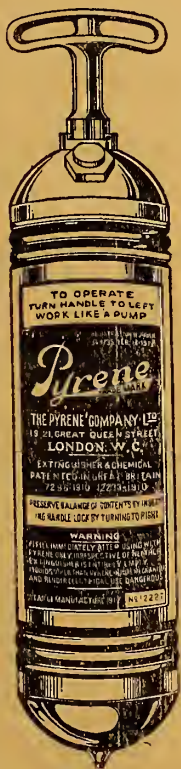
Distributors for

Central and North China

12, Nanking Road.

Shanghai.

THE PYRENE FIRE EXTINGUISHER



Doubly efficient because of simplicity of operation.

Because there is nothing to get out of order, because Pyrene Liquid is non-corrosive and will retain its fire-destroying properties until used, and because of its compact, convenient size, the Pyrene Fire Extinguisher is at once handy, effective, and economical to maintain.

MUSTARD & Co.

Sole Agents

22, Museum Road.

Shanghai.



Mobiloids

A grade for each type of motor.

OIL FOLLY

How Gasoline Dollars Blow Through The Exhaust

Correct Lubrication is a controlling factor in low gasoline consumption.

With an oil of high lubricating efficiency and correct body the motorist is assured a film which thoroughly seals the piston rings.

The power of the exploding fuel charge then acts with full force on the piston head. Full power results with consequent gasoline economy.

Gasoline wastage through oil of incorrect body is more common than most motorists realize.

True, the loss per piston stroke is small. But

piston strokes quickly mount up into the millions. Then the gasoline waste is measured not by the thimbleful, but by the gallon.

The grade of Gargoyle Mobiloids specified for your car in our Chart of Recommendations represents our professional advice after pains-taking engineering analysis.

It has proven its high quality and correct body in actual service.

Our 64 page booklet goes fully into your lubricating problems and contains complete Chart of Recommendations. Write for it today.

Vacuum Oil Company

No. 1, The Bund, Shanghai.

X

POLICY

OF

MOTOR CAR

INSURANCE

COVERING ALL DAMAGE DONE TO OR BY A CAR

EXCESS INSURANCE Co., Ltd.

ASSETS £2,152,660

PEKING:—CALDBECK, MACGREGOR & Co.,

HANKOW:—A. GROSJEAN & Co.,

TIENTSIN:—WHITAMORE & COMMONS.

General Agent:—**C. E. SPARKE**, 44, KIANGSE ROAD, SHANGHAI.

SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01505 0669